Ukek

The Golden Horde city and its periphery

L. F. Nedashkovsky

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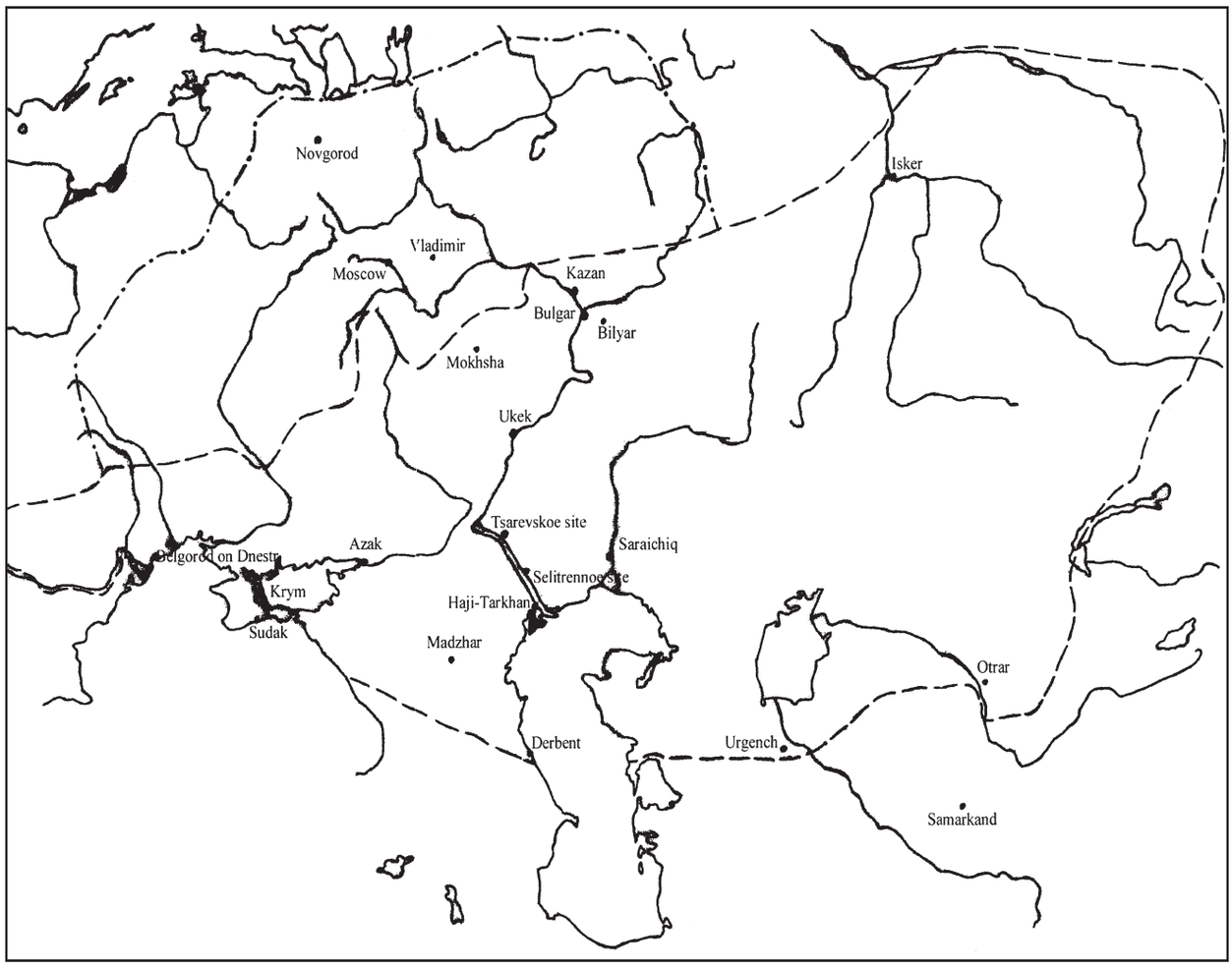

Map of the Golden Horde territory (dashed line)

INTRODUCTION

As a result of the conquests of Chingis Khan and his successors, major part of Eurasia was included in the Mongol Empire in the XIIIth century. The north-western part of these giant territories found itself under the reign of the descendants of Jochi, Chingis Khan's elder son. In the modern research literature this territory is usually called the Golden Horde. The Jochid state occupied huge territories stretching from the lower Danube in the west to the Ob' river basin in Siberia in the east, and from Central Asia and Caucasus in the south to the Kama river basin in the north. In the second half of the XIIIth and in the XIVth centuries the main trade routes connecting the Western European countries with the Eastern Asia, sometimes called the Great Silk Road, passed through the territory of the Golden Horde. This route was started when the Europeans lost their old trade route passing through the Middle East, after total defeat suffered by the Crusaders in Palestine in the XIIth and the XIIIth centuries. At the same time incessant wars of the Hulaguid Iran rulers and the Egyptian Mamluks were raging.

The analysis and classification of data of the written, numismatic and separate groups of archaeological sources on the Golden Horde Ukek were made in this book. The chronological problems of objects' dating were solved in chapters 1-2 and in the conclusion of the book. The stages of foundation and development of Ukek and its agrarian periphery were analysed in chapters 1 and 3 which represents the first research work devoted to the regions of a Golden Horde city.

For a long time the History of the Golden Horde has been attracting the attention of researchers: the serious study of its problems began in the first half of the XIXth century. The interest to the Golden Horde which is strong nowadays, is easy to explain: without the knowledge of the History of Ulus Jochi it is difficult to understand the processes which took place in Russian principalities in the XIIIth - XIVth centuries. These processes resulted in the formation of the united Russian state; the ethnogenesis of many nations in Middle Volga region, Ural region, region of Northern coast of Black sea, Caucasus, Kazakstan, Central Asia and Western Siberia is also inseparable from the facts of the Golden Horde History.

One of key questions facing the researchers of the Jochid state is the problem of parallel existence and interactions of migratory and settled (urban and village) ways of life. 'We should recognise, - wrote G.A.Fyodorov-Davydov, characterising the culture of Ulus Jochi as a whole, - that there are two different cultures: culture of steppe Polovtsians continuing traditions of nomadic culture of East-European steppe of the XIIth – beginning of the XIIIth century, and sincratic culture of the Golden Horde city' (Fyodorov-Davydov, 1966-2, p.210). The greatest accretion, symbiosis of these two social and economic structures is observed in the Volga region, where obviously 'there were more favourable conditions for coexistence of migratory steppe and cities with their agrarian periphery' (Fyodorov-Davydov, 1966-2, p.216); hence, it was in the Volga region that the most developed, 'classical' variant of the Golden Horde culture existed. It was to a large extent promoted by seasonal migrations of Jochid khans just along the banks of the Volga river.

First of all we should briefly characterise ethno-confessional processes in the Low Volga and steppe Ural regions in the Golden Horde period.

The period of existence of the unified Jochid state (the middle of the XIIIth – second quarter of the XVth century) was an important stage of the ethnic and confessional processes in the Low Volga and Ural regions. That time was the crucial epoch in the construction of the Tatar nation and its ethnical self-consciousness. On this stage the islamization of the region under consideration was also taking place.

Before the Mongol invasion which literally 'exploded' the whole existing situation at that time, the nomads – Polovtsians (Kipchaks) reigned in the Volga and Ural steppes. Except them no other large ethnic groups lived on these territories before the Mongol invasion.

Among other peculiarities of the pre-Mongolian time we can mention the much smaller density of population of the steppe Volga region (Garustovich, Rakushin, Yaminov, p.240; Ivanov, Kriger, p.53; Fyodorov-Davydov, 1966-2, p.142, 146-147; Fyodorov-Davydov, 1984, p.8-9; Fyodorov-Davydov, 1994, p.11) in comparison with the steppe Ural and the

southern Russian steppes (there are less then 30 burials of that epoch in the Volga region and hundreds in the northern Black Sea and Ural regions) and the practically absolute absence of the sedentary population (Fyodorov-Davydov, 1966-2, p.207-208; Fyodorov-Davydov, 1984, p.8; Fyodorov-Davydov, 1994, p.10). The Kipchaks' religion was shamanism.

After the Mongol invasion the ethnical situation in the region changed. Ethnic Mongols and the nomads of Central Asian origin, included by them into the empire, appeared here (Fyodorov-Davydov, 1966-2, p.153-161). There is a convincing opinion that the Mongols transferred 'chyornye klobuki' from the southern Russian steppes to the Low Volga region (Malov, Malyshev, Rakushin, p.34; Fyodorov-Davydov, 1966-2, p.150-153), which became the domain of the Golden Horde khans and the centre of Ulus Jochi (Fyodorov-Davydov, 1984, p.9, 32; Fyodorov-Davydov, 1994, p.11-12). The sedentary Old Russian and Mordvin population moved to the Low Volga region from the north-west in the second half of the XIIIth – XIVth centuries (Poluboyarinova, 1978).

In the cities, founded under the initiative and supervision of the Golden Horde khans, the multiethnic population lived. The main part of the city-dwellers was, obviously, the sedentary Kipchaks (Fyodorov-Davydov, 1966-2, p.204-210, 217; Fyodorov-Davydov, 1984, p.211). There were also significant Khorezm, Bulgar and Old Russian components. There lived ethnic Mongols, Finnish and other peoples as well.

In the nomadic steppe prevailed the Kipchak component with the significant influence of Central Asian (including Mongol) part.

Among the religious beliefs of the early period of existence of Ulus Jochi (up to the beginning of the XIVth century) the Turko-Mongolian shamanism dominated in the nomadic steppe. Mongolian shamanism is detective by the archaeological finds of primitive metallic figures of little men ('iltakhans', symbolising the man's soul and fastened to the 'ongons' - an images of the Mongol deities) in the Golden Horde cities and nomad burials of the Low Volga region (Fyodorov-Davydov, 1965-1, p.275-277; Fyodorov-Davydov, 1966-2, p.69; Fyodorov-Davydov, 1984, p.201-202; Fyodorov-Davydov, 1998-1, p.36-37; Fyodorov-Davydov, Bulatov, p.220-221, fig.31,*17*).

In the Golden Horde was also an influence of Nestorian branch of Christianity, widespread between the tribes of Central Asia before Chingis Khan. William of Rubruck mentioned the construction of a big Nestorian church on the right bank of the Volga on the instruction of Sartakh, son of khan Batu, in 1254 (Dzhiovanni del' Plano Karpini, p.185).

In the second half of the XIIIth century the Orthodox Church came to the Low Volga region with the Russian population. In Saray in 1261 the orthodox Saray diocese was founded (Malov, Malyshev, Rakushin, p.88-89; Nasonov, p.45-48), which gradually included into the orbit of its influence the population, not connected originally with the territory of Rus. We have information of Ibn Batuta, who visited the Golden Horde in 1333-1334, that Kipchaks partially accepted Christianity (Tizengauzen, 1884, p.279, 306). In the mouth of Volga on the cemetery Mayachnyy Bugor I, dated by coins of 1270th-1320th, in 1992 was excavated typical Golden Horde burial in coffin, but with the Orthodox cross (Pigarev, 1994-1). In the city Bezdezh, evidently situated on the Low Volga, Russian chronicles mention under 1318 the Orthodox Church building (*Polnoe sobranie russkikh letopisey*, T.XXV, p.166; *Russkie letopisi*, p.137). There are many finds of objects of Orthodox cult in the Low Volga region (Poluboyarinova, 1978).

In the second half of the XIIIth – XIVth centuries the influence of the Catholic Church was notable in the region. It was mainly connected with the Franciscan order and its 'Aquilonis vicaria' (founded in 1270s or in 1280s, probably in 1274 (*Posle Marko Polo*, p.57-58; Golubovich, p.262)) which organised its activity on the territory of the Golden Horde and consisted of two custodias - Gazaria and Saray. We have data about Franciscan monks and their activity in baptism of nobility in Saray; one of them, friar 'Stephanus', was killed by Moslems in 1334 (DeWeese, p.96-98; Golubovich, p.62, 73, 272). Franciscans received aid and protection even from khan Uzbek, who made Islam the state religion of the Golden Horde, and his predecessors (*Posle Marko Polo*, p.118-119, 197; DeWeese, p.96-100). Mentioned even conversion to Christianity persons, who probably could be associated with the brother and nephews of khan Tokta, if not this khan himself (DeWeese, p.98-99; Golubovich, p.62, 73, 272). The bases of the Franciscan monks were located in XIVth century not only in large Ulus Jochi cities - in Low Volga region convents of 'Fratrum Minorum' was established in Saray (already existed before 1286), Ukek and Haji-Tarkhan - but in the nomadic steppe too (*Posle Marko Polo*, p.119; Cathay and the way thither, p.84; Golubovich, p.72, 266-268, 272, 570; Richard, p.95, 243, 303; Soranzo, p.503-504; Wadding, p.233). In XIVth century in Saray was Catholic diocese as well (Spuler, 1943, p.240).

Buddhism probably began to penetrate in to the steppe. We have data that when khan Uzbek got power, he order to kill 'lamas' and 'magicians' (to whom 'give a big honour' his predecessor Tokta) (Tizengauzen, 1884, p.174, 197, 277, 514; DeWeese, p.112-114) to confirm Islam.

In the first half of the XIVth century (since 1312) the role of the state religion in Ulus Jochi went to Islam. Its penetration into the Low Volga and steppe Ural regions probably began straight after the Mongol invasion. First of all the sedentary population was converted to Islam, mainly under the influence of Bulgar and Khorezm. As early as the second half of the XIIIth century Moslem mausoleums functioned in the Low Volga region (Malov, Malyshev, Rakushin, p.122; Pavlenko; Fyodorov-Davydov, 1994, p.35). The Golden Horde khan Berke (1258-1266) took Islam in Bukhara from the Sufi leader Sayf ad-Din Bakharzi (Malov, Malyshev, Rakushin, p.96; Tizengauzen, 1884, p.245, 379; Tizengauzen, 1941, p.19, 205;

[1] Qashani mentioned more than a hundred princes.

DeWeese, p.83-84, 86, 101), follower of Najm ad-Din Kubra. Even in the last third of XIIIth - beginning of XIVth century Moslem formulas presented on Jochid coins (Singatullina, p.59-62; Fyodorov-Davydov, 1998-1, p.30). However, the spread of Islam in the XIIIth century should not be overestimated as it did not have the status of the state religion. The situation changed in 1312. When khan Uzbek (1312-1342) came to power, he made all the Mongol aristocracy take Islam (those who refused to do so, including 120 Chingizid princes[1], were killed by Uzbek (Tizengauzen, 1941, p.141; DeWeese, p.109)). The majority of the city-dwellers of the Low Volga region were probably Moslems already during the reign of Uzbek; we know mosques and Islamic mausoleums of the first half - middle of XIVth century in the Low Volga region (Zilivinskaya, p.18, 20-26, 31-35, fig.4-5; Tizengauzen, 1884, p.305; Fyodorov-Davydov, 1984, p.57-58, 206-210; Fyodorov-Davydov, 1994, p.67-71; Fyodorov-Davydov, 1998-1, p.29). The Noghays proverb says: 'Religion has remained since Uzbek' (Usmanov, p.179; DeWeese, p.90). The prevailing was Islam of the Khanifite sect, but Shafiite sect was also spread. 'At Saray there were many redoubtable men of learning, experts in the fitkha of the Khanifite and Shafiite sects. There were monasteries of sufis.' (Fyodorov-Davydov, 1984, p.203; Fyodorov-Davydov, 1998-1, p.30) Sufi zawiyah was in Saraichiq on Ural river (Tizengauzen, 1884, p.308).

In the steppe the islamization process went much harder. The leading role in the islamization of the Ulus Jochi nomads belonged not to the orthodox Islam but to the Sufi tariqah (Yasaviyah, Naqshbandiyah, Kubraviyah). Khan Uzbek, probably, accepted Islam from the saint of Yasavi lineage Sayyid Ata (Malov, Malyshev, Rakushin, p.111-118; Tizengauzen, 1941, p.206-207; DeWeese, p.101-106, 112, 124, 129, 133-135, 141, 144). The Sufi Islam, with its milder system of ritual demands, was more easily accepted by the nomads. The initial wave of the islamization policy (in the beginning of the Uzbek reign) obviously did not fully touch the steppes. This led to the new push of the state policy of islamization during the Janibek (1342-1357) reign (Malov, Malyshev, Rakushin, p.106; Tizengauzen, 1884, p.264; Tizengauzen, 1941, p.128; Usmanov, p.185; DeWeese, p.95-96, 122). This policy was fruitful, however, the complete islamization of the nomads of the Low Volga and steppe Ural regions took place only in the beginning of the XVth century: it was connected with the policy of the powerful emir Idegei, the famous epic hero (*Barbaro*, p.140; Klavikho, p.144; Malov, Malyshev, Rakushin, p.119-120; Tizengauzen, 1884, p.473-474). In XVth century in the steppes disappear ancient nomadic tradition of burial mounds construction (Garustovich, Rakushin, Yaminov, p.257; Fyodorov-Davydov, 1966-2, p.9, 264-265), that must be connected with islamization process.

Even in the period of the Ulus Jochi disintegration there continued to exist in the steppe the survivals of the Turko-Mongolian shamanism. Even epic 'Idegey' twice mentioned the god Tengri (*Idegey*, p.146, 222). Ibn Arabshakh (1388-1450) wrote about nomads of the Golden Horde: 'Some of them till this time still worship to the idols' (Tizengauzen, 1884, p.457). One of the Italian merchants, Iosaphath Barbaro (he lived since 1436 till 1452 in Tana, Venetian colony in the mouth of Don), mentions the 'wooden or rag idols' transported on carts and other pagan elements (*Barbaro*, p.140, 159). The same author also mentioned a situation when he noticed in the steppe a plate put upside down. When he picked it up, he discovered some boiled millet under it. He asked one nomad to explain that fact and got an answer that the millet was left by pagans. The Italian expressed his surprise that there still existed any, to which his interlocutor laughed and answered: 'They are numerous, but they hide' (*Barbaro*, p.146).

The amount of the preserved to the present time sources (mainly archaeological) on Volga region of the Golden Horde epoch is so great that it cannot be analysed in one, even very significant work. Because of that, we decided to limit our research and to investigate only one, average by size, Golden Horde city – Ukek, and the region nearby, hoping that the conclusions received can be extrapolated to other cities of the Middle and Low Volga region of the second half of the XIIIth - XIVth century, as well as on their periphery.

The Uvek urban site, identified with the Golden Horde city Ukek, is situated on the southern outskirts of modern Saratov (fig.1). The monument had fortification - a bank and a ditch stretching from Kalancha hill to the bank of Volga; in the XVIIIth century the length of the preserved strengthening was almost 400 sazhen. At the Uvek site of ancient city even in the beginning of the XXth century traces of stone constructions of the Golden Horde epoch were observed.

The monument occupies the area of more than 205 ha, besides, it was being washed away by Volga for centuries; it allows to estimate the city population at 9-10 thousand people.

Linguists propose 3 possible meanings of the name 'Ukek': first 'rampart' or 'dam' - from the Mongolian language (Yazykov, p.121), then 'tower' (Mukhamadiev, 1990, p.18-19) and finally 'city, fort' (Khizhnyak, Novozhenova, p.92) both from Old Turkic. In a district of Ukek there are also a lot of Turkic-Mongolian toponyms (Khizhnyak, Novozhenova, p.29, 34, 36, 41, 46-53, 89, 92), which probably appeared in the Golden Horde time: Altynnaya mountain, Ahmat, Idolga, Karaman, Karamysh, Kolyshley, Kumysnaya field, Kurdium, Saratov, Tarlyk, Tarkhanka, Tereshka, Uvesha, Chardym.

The city occupied the central position on a Volga way - major artery of the Jochid state; thus Ukek, probably, was a link between cities of Volga Bulgaria and Low Volga region, and this significantly helped its development. M.G.Safargaliev mentioned Ukek among the cities, which obliged its development to trade (Safargaliev, p.80).

In the History of the Uvek urban site investigations we select four basic stages.

The first stage chronologically dates back to the 2nd half of the XVIth - first third of the XVIIth century.

In 1558 an English traveller Anthony Jenkinson found the hill on the Uvek site, where 'the castle' (*Anglyskie puteshestvenniki*, p.170) had been settled down earlier.

In 1579 and 1581 a group of English merchants, trading at the coast of the Caspian Sea twice passed Uvek. One of them, Christopher Burrough, left some very interesting information about the site of ancient Uvek city. Burrough told about the remnants of a city with a stone castle and described tombstones (*Anglyskie puteshestvenniki*, p.264-265), 'the image of the horse with a rider sitting on it, with the bow in a hand and with arrows on his side' (*Anglyskie puteshestvenniki*, p.265); while describing their way back he also mentioned Uvek (*Anglyskie puteshestvenniki*, p.285).

The widely known 'Kniga Bol'shomu Chertezhu' ('Book to the Large Drawing') made in 1627 on the basis of the data of a boundary of the XVIth and the XVIIth centuries specifies on 'the urban site Uveshenskoe' (*Kniga Bol'shomu Chertezhu*, p.143) or 'Uveshino' (*Kniga Bol'shomu Chertezhu*, p.85) situated close to Saratov.

Most likely, it is the Uvek site that should be considered as 'Saratov site of ancient city', mentioned in correspondence of voevoda prince I.N.Odoevsky and okol'nichy S.V. Golovin with the army leader V.Khokhlov in May, 1614 (*Akty*, 1841, N 15, p.14-15, NN 273-274, p.441-442; see Studentsov, p.16-17), though there are also other opinions (Geraklitov, 1923, p.149-150, 153; Kasovich, p.20; Osipov, p.22-23).

The second stage of site study, which began after more than a hundred years after the termination of the first, dates back to the time from the 60-s of the XVIIIth to the 80-s of the XIXth centuries inclusively. This period is characterised by the beginning of scientific inspection of the monument.

In 1769 Uvek was investigated by academicians I.I.Lepekhin and I.P.Fal'k. In their notes Lepekhin and Fal'k described the bank and the ditch of urban site, with the length of about 400 sazhen, they mentioned coins, pottery and metal wares and also wrote about some brick structures preserved (*Dnevnye zapiski*, p.377-380; *Polnoe sobranie uchenykh puteshestvy po Rossii*, p.118). I.I.Lepekhin for the first time stated the assumption of catastrophic destruction of the Uvek site of ancient city, connected with its rout 'from some enemies' (*Dnevnye zapiski*, p.378).

At the end of XVIIIth - beginning of XIXth century the name of Uvek occurs in geographical dictionaries. 'The New and Complete Geographical Dictionary of the Russian State', and after it the dictionary of A.Shchekatov, marked that near Uvek 'the rests of ancient city Ufeak are visible' (*Novyy*, p.86; *Slovar'*, 1807, p.740; *Slovar'*, 1808, p.521).

In the first quarter of the XIXth century J.F.Erdmann visited Uvek. He briefly described the monument and specified that it could be the ruins of Ukek, mentioned by Arabian authors (Erdmann, 1825, p.71-72).

The prominent researcher of the East academician Ch.M.Fraehn in 1826 was the first to describe a coin struck in Ukek – a silver dirhem of 706 A.H. (1306-07), issued on behalf of khan Tokta (Fraehni, P.199, 649, N6). In another famous work on the Golden Horde numismatics he published that type of the Ukek coins and noted that the city Ukek was situated 'eight versts down Saratov', in the place of Uvek urban site (Fren, 1832, p.45).

In 1834 the first research work about Ukek - Fraehn's article - was published in German. Its contents were stated in the journal of Russian Ministry for Internal Affairs (*O mongol'skikh drevnostyakh*, p.485-490), and in 1840 the article was republished in Russian (Yazykov, p.103-125). Ch.M.Fraehn defined all available information from written sources about Ukek and Uvek site (Yazykov, p.105-118), and also described some finds from the monument transferred to a Russian Academy of Sciences by the Saratov governor Pereverzev (Yazykov, p.118-120). Fraehn on the basis of various sources proved that the city of Ukek in written and numismatic sources should be identified with the Uvek urban site (Yazykov, p.111-114).

Soon after Fraehn Saratov researchers of regional ethnography were interested in Uvek. So A.F.Leopol'dov specified ruins of 'Tatar city', coins, found on them, and finds, and also the legends connected with them (Leopol'dov, p.39-40).

Information from the written sources and archaeological data on Ukek were engaged in one work of V.V.Grigor'ev (Grigor'ev, 1845, p.189, 471, 473-476, 478-479).

In the 40-s of the XIXth century the monument was studied by a well-known orientalist G.S.Sablukov. In 1846 he wrote an article about Uvek site which was published only in 1884 (Sablukov, 1884), after the author's death. In the sketch G.S.Sablukov described in detail the district of Uvek, the site of ancient city itself and finds which were made in it. He also on the basis of the analysis of various sources proved that Uvek urban site represents the rests of the Golden Horde Ukek. In his other works G.S.Sablukov also used the materials from Uvek (Sablukov, 1844, p.6-7, 14-15; Sablukov, 1895, p.28, 35).

P.S.Savel'ev (Savel'ev, 1858, p.272-283), described the coins from the collection of the Uvek landowner K.Ya.Maurin, assembled on site of the ancient city. P.S.Savel'ev drew attention of the Russian Archaeological Society to the collection of coins and finds belonging to K.Ya.Maurin, which was sold at that time (*Protokol zasedaniya Vostochnogo otdeleniya*, 1859, p.121).

Some items of information about the site and about finds in it are contained in the foreword to the 'Lists of the Inhabited Places' in Saratov province, made according to the information of 1859 (*Spiski*, p.XXVI-XXVII). The more detailed information is presented in the 'Materials to the Description of Saratov Province' (*Svedeniya o drevnikh zemlyanykh nasypyakh*, 1875, p.9-11).

Beginning from the 60-s of the XIXth century the works of investigative character were carried out at the urban site.

In 1864 V.G.Tizengauzen inspected the Uvek site of ancient city (Archives of IIMK, fund 1, 1864, file 15, p.7).

In 1877 the St. Petersburg professors Kessler and Grim for the first time made small excavations at the monument; they managed to reveal the rests of an ancient water pipe (Minkh, 1879, N 220; F.G., 1888, p.5).

In 1878 and 1879 the archaeologist from Kazan P.A. Ponomarev visited the Ukek ruins. In 1878 he made a report at a session of a Society of Archaeology, History and Ethnography of Kazan University (IOAIE) about the trip (*Protokol III-go*, 1878, p.49-50), and in a year he published an article 'On the ruins of the city Ukek near Saratov ' (Ponomarev, 1879), where he specified all kinds of finds from Uvek, described the monument itself, and also the rests of stone structures on it. P.A.Ponomarev generalised some facts on collections of finds and coins assembled on Uvek (Ponomarev, 1879, p.324-334). Numerous articles bought from the local inhabitants together with pictures and plan of the Uvek site he transferred to the IOAIE museum (*Protokol III-go*, 1878, p.50).

The monetary finds assembled by P.A.Ponomarev were investigated and then published by Kazan numismatist V.K.Savel'ev (*Protokol III-go*, 1878, p.50-51; Savel'ev, 1880, p.171-176). Other members of IOAIE took part in the investigation, too. In 1878 the urban site was examined by S.M.Shpilevsky. In the same year he made a report at the Society assembly 'The Review of the Literature Data about the Ancient City Ukek' (*Protokol III-go*, 1878, p.46-48). In 1879 N.A.Tolmachev visited Uvek (*Protokol XII*, 1885, p.6).

In August 1879 Saratov archaeologists A.N.Minkh, A.I. Sokolov, A.I.Shakhmatov and others visited the site of ancient city. A.N.Minkh published a detailed sketch about Uvek, noted by a wide range of the used literature and sources (Minkh, 1879).

In 1884 the monument was examined by A.A.Vasil'chikov (Vasil'chikov, 1893) who later also wrote an article on the trip.

In 60-s – 80-s the Uvek site of ancient city became quite well-known in the research spheres, which served as the basis for making up a number of concepts. For example, the Odessa professor F.K.Brun assumed, mainly on the basis of the XIVth – XVth centuries cartographic material, that, besides Volga Ukek there existed one more city with the same name, which was situated on the northern coast of the Azov sea, near modern Mariupol' (Brun, 1863, p.138-139; Brun, 1873, p.12-13; Brun, 1878, p.331; Brun, 1879, p.205-207; Brun, 1880, p.170-171, 277). Other well-known researchers also used information about the Uvek site to prove their statements (Zabelin, p.234-235). New sources on the History of Uvek were put into circulation (Tizengauzen, 1884, p.236, 302-303; Chekalin, 1889, p.14-18; Chekalin, 1890, p.247-250); information on the Uvek site of ancient city appeared in historical works, including foreign ones (Pekarsky, p.258; Trutovsky, p.74-79; Khovansky, p.199, 234-235; Chekalin, 1888, p.12-39; Schmidt, p.182-183), and tourist guide-books (*Volga ot Tveri do Astrakhani*, p.343, 357; Gusev, Khovansky, p.1-2; Kuchin, p.221; Lender, p.182; Neydgardt, p.68).

There appeared votes for site protection against the local landowners who ordered to break ancient basements to sell the stone in Saratov (*Svedeniya o drevnostyakh, naydennykh bliz derevni Uvek*, 1878, p.62-63; F.G., 1888, p.5).

Since the second half of the 80-s of XIXth century SUAK played a large role in protecting the urban site and buying up the finds. SUAK was created at the end of the considered period - in 1886. Since the first years of its existence the commission was engaged in collecting articles found on Uvek (*Otchet o deyatel'nosti SUAK v 1888-1889 godu*, p.24; *Protokol obshchego sobraniya SUAK 19-go sentyabrya 1888 goda*, p.XX). The commission was the organiser of broad archaeological investigations on the Uvek site of the ancient city which began in the 90-s of the XIXth century.

The third stage of researches at the Uvek site of ancient city took place in the 90-s of the XIXth - first quarter of the XXth century. At this time the main archaeological works were made on Ukek ruins.

On April 29, 1890, the members of SUAK made 'a research excursion' to the Uvek site of the ancient city, which was limited to the questioning of farmers and inspection of the territory (Krasnodubrovsky, 1890-1; Krasnodubrovsky, 1891, p.4).

On the general meeting of SUAK on May 31, 1890, its chairman L.L.Golitsyn made a report (Golitsyn, Krasnodubrovsky, p.1-7; *Protokol obshchego Sobraniya SUAK 31 maya 1890 goda*, p.VI) where he put forward the question of the site protection and the necessity of large archaeological excavations in Uvek. The commission asked its curator, the Saratov governor A.I.Kosich, to help in the site protection, and the owners of Uvek – to allow the excavations (*Otchet o deyatel'nosti SUAK v 1889/90 godu*, p.125-126).

On June 16, 1890, D.L.Mordovtsev visited Uvek (Mordovtsev). Four days later, on June 20, the site was visited by S.S.Krasnodubrovsky and P.A.Ponomarev. This trip was organised to 'make up a detailed description of the site for the later presentation of the description to the Emperors Archaeological Commission' (*Khronika*, 1890; see also Krasnodubrovsky, 1890-2; Ponomarev, 1890).

The periodicals announced about the intention to study the remnants of Ukek (Ponomarev, 1891; *Razvaliny Ukeka, bliz gor. Saratova*); the discussion of the issue began. A part of the authors supported the idea of broad excavations and set large hopes on them (Lappo-Danilevsky, p.244; *Ukek. Doklady i issledovaniya po arkheologii i istorii Ukeka*, p.313), another part considered that the activity should have been limited to the protection one because of the absence of qualified archaeologists in SUAK (Truvorov, p.592-593).

In 1891 the first large-scale excavations of Uvek urban site were carried out under the inspection of S.S.Krasnodubrovsky, and supervision of L.L.Golitsyn; P.A.Ponomarev took part in the works (*Ekspeditsii, raskopki i sluchaynye nakhodki, imevshie mesto v Rossii v 1891 g.*, p.226). The excavations studied the rests of four brick constructions (fig.2-4), some of which were not opened completely, and hearth (*Otchet o*

deyatel'nosti SUAK v 1890/91 godu, p.151; *Raskopki v Saratovskoy gubernii*, p.99-100; Archives of IIMK, fund 1, 1891, file 30, p.8-11). By the recommendation of Archaeological Commission the articles found during the excavations were given to the Historical Museum and the SUAK Museum (*Tablitsa raspredeleniya drevnostey*).

It is necessary to mention the technique of this first large excavation on Uvek. As far as known it was far below the average level of archaeology of the end of the XIXth century. Thus the works of 1891 deserved a number of rather critical responses in contemporary periodicals (D.P., 1892; Gore-arkheologi, 1891; Gusev, 1891). These pitfalls were fully recognised by the supervisors of investigations; they hoped for the further professional excavations. This is what L.L. Golitsyn wrote to N.A.Tolmachev: 'We made not the excavations but explorations – tried to see what could be expected from excavations – in the true sense of the word, from excavations which will be made not by us, but by people more experienced in them than we are. We have made our business as well as we could working with the largest possible conscientiousness' (Archives of Prof. N.A.Tolmachev, file 2291, p.37).

In 1892-1893 F.V.Dukhovnikov and A.A.Lebedev were observing the construction of the Ryazan-Ural railway; then the large collection of articles was assembled (fig.5-10, 13), the width of an archaeological layer in various parts of the site of ancient city was revealed and a number of burials was investigated (Dukhovnikov, 1893; Kedrov, p.305; Medoks, 1892, p.643-646). In summer 1893 Uvek was examined by A.A.Spitsyn - one of famous Russian archaeologists, who worked according to the instructions of St. Petersburg's Archaeological Commission (*Otchet o poezdke*, 1895, p.92; *Proizvodstvo arkheologicheskikh raskopok. Saratovskaya guberniya*, p.28; *Protokol ekstrennogo*, 1894, p.263). Supervision at the construction works in the region of Uvek station was carried out later too (*Protokol zasedaniya SUAK. 28-go noyabrya 1895 goda*, p.34-35, 37-38).

In autumn 1895, with participation of the French archaeologist baron de Bay, the investigation of one of the brick buildings, decorated by mosaic, with the rests of the furnace, and the rests of other brick and stone structures in the central part of the site was carried out (Ballod, 1923-1, p.69-70; *Raskopki na Uveke*, 1895; Rykov, 1923-2, p.587; *Khronika*, 1895-1-2; Z.Z., 1895; Archives of IIMK, fund 1, 1895, file 122, p.6-17, 18-23, 25)[2].

At the end of the XIXth - beginning of the XXth century the regular collecting and buying up of finds (fig.11-12) from the urban site was carried out by S.A.Shcheglov, B.V.Zaykovsky, A.A.Krotkov and others.

By the second decade of the XXth century the investigative works on Uvek had become frequent. They also became accompanied by excavating of separate archaeological objects. In 1908 alongside with S.A.Shcheglov and B.V. Zaykovsky, such researchers as A.A.Geraklitov, G.G.Dybov, A.A.Krotkov and A.F.Sadovnikov took part in them (*Obshchee sobranie [SUAK] 11 oktyabrya 1908 goda*, p.35; Archives of SOMK, fund 85, inventory 1, file 15, p.66; file 138, p.35-36; file 139, p.27; file 150, p.40). In the general meeting of SUAK on October 11, 1908, S.A.Shcheglov made a report on the trips to Uvek and set a question of the necessity of the organising of 'true excavations' on the Uvek site of the ancient city (*Obshchee sobranie [SUAK] 11 oktyabrya 1908 goda*, p.35). However, no significant excavations of the site were made in 1909, though the explorations was made actively. This is what B.V.Zaykovsky wrote about it: 'The group of Commission members – A.A.Geraklitov, A.A. Krotkov, P.N.Shishkin and S.A.Shcheglov weekly made explorations and through collecting of antiquities there' (Zaykovsky, 1910-1, p.67).

It was settled to continue the works of SUAK in Uvek in 1910 (*Zasedanie [SUAK] 13 maya 1910 goda*, p.28). In that year small excavations of the archaeological layer of the site of ancient city on the north-east outskirts of 'Nobel' company warehouses were also made (GASO, fund 407, inventory 2, file 188, p.14; GASO, fund 407, inventory 2, file 985, p.28; KZVM, Vol.I, N 1442); then a pottery kiln with a diameter of 2 1/2 arshin was excavated on a monument (Archives of SOMK, fund 85, inventory 1, file 14, p.1-4; GASO, fund 407, inventory 2, file 188, p.11-12).

Small excavations and buying up of antiquities took place on Uvek even in 1912 (Zaykovsky, 1913-2, p.213; Noskova, 1976, p.7).

The most well-known are the excavations made in 1913 when under the supervision of a member of SUAK P.N.Shishkin a brick mausoleum of the first half of the XIVth century was excavated (Krotkov, 1915). In these works B.V.Zaykovsky and A.A.Krotkov also took part; the later prepared the materials of excavations for publication (Krotkov, 1915, p.111; Mironov, 1992, p.81).

After the above-mentioned investigations the excavations of the Uvek site of the ancient city were resumed only in 1919 under a general supervision of professor F.V.Ballod. P.N.Shishkin, S.N.Chernov and especially B.V.Zaykovsky took part in the works too (Ballod, 1923-1, p.6-7; Mironov, 1992, p.82-83). A part of a brick building with two crypts adjoined to it, together with 2 kilns for firing the tiles and vessels, as well as a single children's burial in a crypt were excavated (Ballod, 1919; Ballod, 1923-1, p.73-82). All investigated objects were situated close to those excavated in 1913.

Small excavations were made on Uvek site in 1921 (*Kratky*, 1923; GASO, fund 407, inventory 2, file 373, p.38) and 1923 (*Kratky*, 1923; Rykov, 1923-1; Rykov, 1923-2, p.590; GASO, fund 407, inventory 2, file 396, p.2).

During the excavations of 1923, which were carried out under a supervision of P.N.Shishkin, a brick building of 1919 was opened completely, two crypts with burials in coffins were revealed in it (GASO, fund 407, inventory 2, file 980, p.2-9).

[2] The British Museum NN OA + 2800-2836.

After 1923 on the site of ancient city the collecting of finds, separate investigations and excursions (GASO, fund 407, inventory 2, file 448, p.11-12, file 449, p.24, file 476, p.13-14) were the only activities to proceed.

The fourth stage chronologically concerns to a period from the middle of the 1920s. This period can be characterised by attempts of theoretical understanding of already available materials. The researchers in this period were interested only in certain categories of material or separate finds; the complex study of culture of the Golden Horde Ukek, as well as its excavations, was not made.

Besides the publication of the excavation data (Ballod, 1919, 1923-1; Krotkov, 1915), in the first third of the XXth century the first ware-studying works concerning Uvek materials appeared (Vinogradov, 1922; Gorodtsov, 1926; Zaykovsky, 1910-2; Zaykovsky, 1929; Krotkov, 1926; Papa-Afanasopulo, 1925). These materials were also taken by the authors of the first half of the XXth century as the facts sustaining their own concepts (Arzyutov, 1926, 1929, 1930, 1933, 1936-2; Ballod, 1923-1-2, 1924; Grekov, Yakubovsky, 1937, 1950; Debets, 1932, 1948; Zaikovsky, 1908, 1913-1, 1924, 1926; Krotkov, 1913, 1923, 1927, 1930; Krotkov, Shishkin, 1910-1-2; Kusheva-Grozevskaya, 1928; Ol'shanetsky, 1927; Oppokova, 1924; Rykov, 1928, 1929-1-2, 1932, 1936, Trofimova, 1936; Fasmer, 1926, 1929; Yakubovsky, 1932, 1947; Spuler, 1943).

In the last decades the museum collections assembled for years on Uvek urban site began to attract attention of the researchers more often. In 1960th-1980-s glazed (Bulatov, 1968, 1969-1,3, 1976-1; Matyukhina, Morzherin; Panova, 1986) and unglazed (Mikhalchenko, 1973, 1974; Fyodorov-Davydov, 1984-1-2, 2001) pottery from Ukek, mosaics and majolica tiles (Voskresensky, 1967; Noskova, 1973, 1976; Malevannyy, 2001), glass wares (Busyatskaya, 1972, 1973, 1976; Kramarovsky, 1997), anthropological materials and types of burial ceremony (Gerasimova, Rud', Yablonsky, 1987; Yablonsky, 1975, 1980, 1986), things of Russian origin, marks on ceramics and ornaments made of a stone (Poluboyarinova, 1972, 1973, 1978, 1980, 1991), bone ornamental facings of quivers (Malinovskaya, 1974), metallic mirrors (Vinogradov, 1987; Kramarovsky, 1975; Polyakova, 1977, 1978, 1996), casting moulds (Krymina, 1977), jewellery business and toreutics (Kramarovsky, 1974, 1985, 1991-1-2, 1999-1, 2001; Kramarovsky, Poluboyarinova, 1982; Polyakova, 1996), nomadic antiquities and other sources (Garustovich, Rakushin, Yaminov; Efimova, 1958; Mys'kov; Fyodorov-Davydov, 1964-1, 1965-1, 1966-1-2, 1973, 1974, 1976, 1981, 1984-1-2, 1994, 1998-1-2, 2001; Fyodorov-Davydov and Bulatov, 1989) were partially investigated. Also the coinage of Ukek was studied (Fyodorov-Davydov, 1960, 1961, 1963, 1965-2, 1980; Mukhamadiev, 1983, 1986; Pyrsov, 1988, 1992; Singatullina, 1985-1-2, 1998). The materials of Uvek site were used by V.L.Egorov (Egorov, 1969, 1973, 1974, 1977, 1985, 1997), A.P.Smirnov (Smirnov, 1951; Smirnov and Fyodorov-Davydov, 1959), A.Kh.Khalikov (Khalikov, 1978, 1989, 1994) and other authors for construction of the concepts and reinforcement their by analogies.

During the last two decades the investigations on Uvek have been renewed: 1978 - N.Il'in, 1986 - N.M. Malov, K.Yu. Morzherin, 1991 and 1994 - D.G.Barinov and I.I. Dremov (Sedov, 1995, p.7), 1993-1998 - L.F. Nedashkovsky (Nedashkovsky, 1994-3, 1995-6, 1996, 1999-1, reports for 1993-1998). Question about the preservation and studies of Ukek's heritage have been actively discussed in public opinion of Saratov region during the last years.

Despite the active researches of the last two decades the regions of Ukek remain less investigated. Their study began only on a boundary of the XIXth-XXth centuries. Members of the Saratov Research Archival Commission and persons co-operating with them investigated the environs of the village Kvasnikovka (1890, 1908, 1911), Hmelevsky I cemetery (1898), Ahmatskoe fortress (1904, 1909, 1911-1912), Hmelevskoe settlement, district Podstepnoe near village Shumeyka (1908), dune Praporsky Bugor at farm Shalovo (1908, 1912-1914), barrows at village Dvoenka (1909), Chardym cemetery (1909-1910), Ust'-Kurdumskoe (1910) and Chardym I fortresses (1910, 1913, 1915), site Martyshkino (1912), Korol'kov's summer residence (1913-1914), site near village Uzmor'e (1914), Pokrovskie barrows (1914, 1918-1920) and environs of the village Kurdium (1915).

In the 1920-s – 1930-s the excavations and investigations on the territory of modern Atkarsky, Voskresensky, Krasnoarmeysky, Lysogorsky, Marxovsky, Saratov, Sovetsky and Engels areas (N.K.Arzyutov, F.V.Ballod, B.V.Zaykovsky, A.A.Krotkov, T.M.Minaeva, P.D.Rau, P.S.Rykov, I.V.Sinitsyn, P.D.Stepanov, P.N.Shishkin and others) were made. In 1944, 1947, 1950 and 1959 I.V.Sinitsyn surveyed Alekseevskoe fortress, in 1953 he studied barrow group at the village Skatovka, in 1956 and 1959 E.K.Maksimov carried out investigations in Saratov, Voskresensky and Engels areas, and in 1958 the investigations in Saratov and Voskresensky areas were carried out by M.E.Fokin. In 1960-1965 I.V.Sinitsyn investigated Tanavskoe fortress, barrows at the villages Ust'-Kurdyum and Dolgy Buerak, and in 1961-1968 significant works in Voskresensky, Krasnoarmeysky and Saratov areas were carried out by Yu.V.Derevyagin, E.K.Maksimov, V.G. Mironov, I.V.Sinitsyn, V.A.Fisenko and D.S.Khudyakov. E.K. Maksimov in 1969 dug out the barrow group at the village Krutoyarovka. In 1971 T.A.Khlebnikova made small excavations of Alekseevskoe fortress, and in 1975, 1977 and 1979 N.M.Malov carried out the investigations in Saratov, Voskresensky and Krasnoarmeysky areas.

In the 1980-s – 1990-s the wide excavations and investigations in Voskresensky (N.M. Malov, V.G. Mironov, K.Yu. Morzherin), Krasnoarmeysky (V.A. Lopatin, N.M. Malov, K.Yu. Morzherin, S.I. Chetverikov), Lysogorsky (A.D. Matyukhin, S.I. Chetverikov), Novoburassky (S.Yu. Monakhov), Saratov (I.I.Dremov, A.P.Zakharikov, G.I. Kasankin, O.V.Kocherzhenko, N.M.Malov, K.Yu.Morzherin, L.F.Nedashkovsky, S.I.Chetverikov, G.L.Yakubovsky), Sovetsky (D.G.Barinov, I.V.Semenova), Tatishchevsky (V.B.Vorob'ev) and Engels (D.G.Barinov, L.L.Galkin, I.I.Dremov, G.I. Kasankin, O.V.Kocherzhenko, V.A.Lopatin, S.V.Lyakhov, N.M.Malov, V.G.Mironov, K.Yu.Morzherin, S.I.Chetverikov, A.I.Yudin, G.L.Yakubovsky) areas were developed.

During the study of the Uvek site of ancient city and monuments of Saratov region huge amount of sources was collected, that are capable to help to spill light on History and material culture of the Golden Horde Ukek and its regions. Nowadays became obvious the necessity for both the new modern archaeological excavation on the present vacant sites of Uvek urban site and in its regions, and introduction of the materials from all available archaeological collections from these interesting monuments into the research.

Despite the rather long study of Ukek, this Jochid city does not belong to the well investigated ones – the latest large excavation of its territory was finished eighty years ago; moreover, not many special separate works are devoted to Ukek. Among them it is possible to note only articles written by Ch.M.Fraehn (Yazykov, 1840), G.S.Sablukov (Sablukov, 1884), A.N. Minkh (Minkh, 1879), P.A. Ponomarev (Ponomarev, 1879, 1891), V.K.Savel'ev (Savel'ev, 1880), A.A.Vasil'chikov (Vasil'chikov, 1893), A.A.Geraklitov (Geraklitov, 1910), A.A.Krotkov (Krotkov, 1915) and P.S.Rykov (Rykov, 1923-2), as well as a small work by F.V.Ballod (Ballod, 1919) and a monograph by L.L.Golitsyn and S.S.Krasnodubrovsky (Golitsyn and Krasnodubrovsky, 1890).

The sources on the History of Ukek and its regions are rather various. In the given research we tried to involve all available categories of sources on the theme: written, numismatic and, first of all, most numerous – archaeological. The main part of archaeological materials nowadays is kept in the funds of Saratov Regional Museum of Regional Ethnography (SOMK) and National Museum of the Republic Tatarstan (NMRT), however materials of the State Historical Museum (GIM) and State Hermitage (GE) are also involved in the work. The sources nowadays inaccessible to the author were studied under the publications of the predecessors. The archaeological data are certainly involved not completely – due to extensiveness of available materials. Detailed description is given only to several mainly metal articles from Uvek urban site; involved several kinds of stock (wearing-apparel components, mirrors, articles of arms and daily life, casting moulds, fishing stock, Old Russian finds, whole shapes of pottery) were studied with the maximal completeness. During the work with archaeological materials collections of the Archaeological Museum of Kazan State University (AKU), Astrakhan Museum-Reserve (AMZ), Bolgar State Historical-Architectural Reserve (BGIAZ), the British Museum (London), Engels Museum of Regional Ethnography (EKM), Kirov Regional Museum of Regional Ethnography (KOMK), Penza State United Museum of Regional Ethnography, Saratov Regional Museum of Regional Ethnography (SOMK), State Hermitage (St. Petersburg), State Historical Museum (Moscow), National Museum of the Republic Tatarstan (Kazan) and Volgograd Regional Museum of Regional Ethnography (VOKM) were involved. In the work the materials of Archives of Institute of Archaeology (Moscow) and Institute of the History of Material Culture (St. Petersburg) of Russian Academy of Sciences, Saratov Regional Museum of Regional Ethnography and State Archive of the Saratov region are widely used.

The novelty of this research is contained in the fact that the author tries to analyse the material, which is known for a long time but has not yet been discussed properly. The majority of the used data have not been published before. The data investigated have given the opportunity to make conclusions which are important not only for the investigation of this region. For the first time materials of Uvek site were separately systematically described and published (Izmaylov, Nedashkovsky; Morzherin, Nedashkovsky, 1994, 1996; Nedashkovsky, 1993, 1994-1-2, 1995-1-5, 1997-1, 1998; Nedashkovsky, Rakushin, 1998-2). For the first time the regions of Ukek were considered as the complex set of monuments gravitating to one Golden Horde city; it is important because no special research has been devoted to the problem of interaction of Golden Horde cities with their agrarian periphery. Our results can be further used for writing generalising works (including those of popular character) on archaeology, History and regional ethnography of Saratov area. In 1993-2001 the author carried out field archaeological research (Nedashkovsky L.F., 1994-3, 1995-6, 1996, 1997-2, 1999-1, reports for 1993-2001) - the continuous investigations on puls of the rivers in Saratov area covered the area of more than 450 km^2; Uvek site, settlements Boldyrevskoe, Konstantinovskoe, Hmelevskoe I and one nearby village Pristannoe were surveyed, 22 new, earlier unknown monuments were opened (including the Golden Horde settlements Bagaevskoe, Kolotov Buerak, Rokotovskoe, Hmelevskoe II and Shiroky Buerak, cemeteries Hmelevsky II and III, Shiroky Buerak, and also 8 sites); in 1999-2001 excavations of settlements Hmelevskoe I and Shiroky Buerak was carried out.

The monograph structurally is divided into three chapters: in the first chapter the available written and numismatic data are considered and in two others – the archaeological data (six categories of the material from Uvek site of ancient city - wearing-apparel components, bronze mirrors, articles of arms and daily life, fishing implements, whole ceramic shapes, Old Russian materials - are examined; also the monuments from Ukek region are characterised). In the conclusion some data on chronology of the considered categories of stock are presented. In the appendices the total descriptions of monetary finds and list of illustrations are given.

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Chapter I.
WRITTEN AND NUMISMATIC SOURCES

§ 1.1. Ukek in written monuments of the XIIIth-XVIth centuries (Brief characteristics)

The written sources on the History of the Golden Horde city Ukek have not been published together yet. Moreover, no special work was devoted to it. Nevertheless attempts to analyse the written monuments of Ukek were made long ago. Works by Ch.M.Fraehn (Yazykov), as well as L.L.Golitsyn and S.S.Krasnodubrovsky (Golitsyn, Krasnodubrovsky) are the most complete sources. Other authors have not created more complete collection of the written data. They were limited to the brief review of already known sources (see Gusev; Ponomarev, 1879, 1890, 1891; Rykov, 1923-2; Sablukov, 1884; Chekalin, 1892).

The purpose of the given paragraph is to characterise all written items of information of the XIIIth - XVIth centuries on the Ukek History in a chronological sequence.

In the written sources of the pre-Mongolian period, and also in the Arabian and Persian chronicles of the period of Mongol invasions the city of Ukek is not mentioned. It most likely speaks about its occurrence after the gain of the Volga region by the Mongols.

The famous Plano Carpini in his 'The History of the Mongols' did not mention Ukek, however, he did not mention any city of Volga region (see Dzhiovanni del' Plano Karpini).

But a few years after Plano Carpini, in 1253, the ambassador William of Rubruck found the Golden Horde cities based by the Mongols themselves. Two of such 'settlements' for the control of the ferry of the ambassadors and merchants were on Don (Dzhiovanni del' Plano Karpini, p.109-110), and one - on the right bank of the Volga (Dzhiovanni del' Plano Karpini, p.118).

From Rubruck's notes it is possible to determine rather precisely the site of the Volga region settlement. Rubruck informed that 'cities of Great Bulgaria were five days away from it up to north' (Dzhiovanni del' Plano Karpini, p.118). Also Rubruck said that distance from the Iron Gates (Derbent) up to Bulgar was more then 30 days away (Dzhiovanni del' Plano Karpini, p.118-119); Rubruck himself travelled 15 days from Saray to Derbent (see Dzhiovanni del' Plano Karpini, p.186).

On this data it is easy to conclude that Rubruck's 'new settlement' was situated down the Volga 10 days away northward from the Saray i.e. on two thirds of way from the Saray up to cities of the Volga Bulgaria. Taking into account that in Rubruck's times the Saray was at the modern village Selitrennoe of Astrakhan area, and Bulgarian cities of pre-Mongolian period reached Samarskaya Luka in the south, it is almost with complete reliance possible to connect Rubruck's settlement with Ukek, as the single large early Golden Horde city occupying the specified place on the right bank of Volga.

The first identification of Rubruck's settlement with young city Ukek was made in the XIXth century by the German researcher F.M.Shmidt (Schmidt, p.182-183). This opinion was shared by A.I.Malein (Ioann de Plano Karpini, p.195, comment to p.96) and N.P.Shastina (Dzhiovanni del' Plano Karpini, p.230, reference 126), commentators of the Rubruck's editions in Russian, and other researchers (Ballod, 1923-1, p.70; Bartol'd, p.136; Dukhovnikov, Khovansky, p.20; Oppokova, p.30; Safargaliev, p.84; The journey of William of Rubruck; Wyngaert, p.212).

However in 1969 V.L.Egorov made the suggestion, later supported by M.D.Poluboyarinova and A.G.Mukhamadiev, that Rubruck's new settlement was the city Bel'dzhamen, identified with Vodyanskoe site of ancient city situated at modern Volgograd region (see Egorov, 1969, p.47; Egorov, 1985, p.76; Egorov, Poluboyarinova, p.66-67; Mukhamadiev, 1974, p.80; Poluboyarinova, 1972, p.186; Poluboyarinova, 1978, p.72-73, 131).

On this assumption it would be necessary to stop in more details.

Not only the text but also the archaeological and numismatic data do not allow to identify Rubruck's settlement with Vodyanskoe site of ancient city.

During long-term systematic excavations on this monument only one Golden Horde coin of the XIIIth century was found (See Egorov, Fyodorov-Davydov, p.166); all others are dated not earlier than the second decade of the XIVth century (see Egorov, Poluboyarinova, p.66; Egorov, Fyodorov-Davydov, p.164-166; Mukhamadiev, 1974, p.88; Fyodorov-Davydov, 1960, p.134, N 22; Fyodorov-Davydov, 1963, p.188, N 354).

It was B.V.Zaykovsky who noticed that the earliest Golden Horde coins from Vodyanskoe site of ancient city, from more than 20000 known to him, are rapped out several decades later than early coins from Uvek site, many of which are dated as the third quarter of the XIIIth (Zaykovsky, 1908, p.36; Zaykovsky, 1924, p.50-51, 54).

Bulgarian and Russian influence in Bel'dzhamen's culture accepted as one of the basic arguments (Egorov, 1969, p.47; Egorov, Poluboyarinova, p.66; Mukhamadiev, 1974, p.80; Poluboyarinova, 1978, p.72-73, 131), can not be a proof, as it is also presented in Uvek materials (see § 2.7; Efimova, 1969, p.68, 70-71, 73; Polyakova, 1977, p.81; Smirnov, 1951, p.64; Khalikov, 1989, p.131; Khudyakov, p.229-230).

And finally, researchers who made excavations at Vodyanskoe site of ancient city and offered to identify it with 'new settlement' of Rubruck, not only date all opened by them constructions on Bel'dzhamen's ruins as the XIVth century (see Egorov, 1980; Egorov, Poluboyarinova; Egorov, Fyodorov-Davydov; Mukhamadiev, 1974), but also do not fix the archaeological layer of the XIIIth century there (Poluboyarinova, 1972, p.186).

All these data speak of much later occurrence of Bel'dzhamen than Ukek, the monetary circulation in which was developed in the XIIIth century (Fyodorov-Davydov, 1963, p.171).

The assumption that Rubruck in 1253 found Ukek on Volga in the process of building is proved by Marco Polo's 'Book' - indisputable certificate of occurrence of Ukek not later than the 50-s of the XIIIth century.

Describing the trip to Karakorum of his father and his uncle, Marco Polo mentioned that from Bulgar the Polos went to the city 'Ukaka', i.e. Ukek (*Kniga Marko Polo*, p.45; The book of Ser Marco Polo, Vol.I, p.5). By the context, it was in the beginning of 1262. There are no other written sources of the XIIIth century about Ukek but from the first half of the XIVth century we have some information on this Golden Horde city.

For instance, the West European documents (three of which are dated as 1320s, 1330s and 1370s-1380s) inform that in Ukek in the XIVth century there was one of the main bases of Catholic Franciscan monks (*Posle Marko Polo*, p.119; Cathay and the way thither, p.84; Golubovich, p.570; Pelliot, p.137; Richard, p.95, 243, 303; Soranzo, p.503; The book of Ser Marco Polo, Vol.I, p.9; Wadding, p.233).

The Arabian geographer Abu al-Fida' informs in his book 'Takvim al-buldan' ('Table of countries'), completed in draft variant in 721 A.H. (1321), that Ukek is situated on the western coast of the Volga between Saray and Bulgar on the distance of about 15 days away from each (Golitsyn, Krasnodubrovsky, p.70; Yazykov, p.109; Büsching, 1771, p.365); in the beginning of the composition describing Volga he said that it consistently proceeds through cities Bulgar, Ukek, Bel'dzhamen and Saray (Golitsyn, Krasnodubrovsky, p.67-70; Tolmachev, p.95; Yazykov, p.109; Büsching, 1770, p.173). Abu al-Fida' informs that the authority of the Golden Horde khans reaches up to Ukek and not further (Yazykov, p.109; Büsching, 1771, p.365; Schmidt, p.182). The data of Abu al-Fida' about Ukek allowed the first researchers to confidently identify it with Uvek site of ancient city (see Sablukov, 1884, p.313-316; Yazykov, p.111).

Approximately at the same time with the work of Abu-l-Fida the Persian composition known as 'History of Vassaf' was written. In the fifth part of it, written about 728 A.H. (1328), Ukek was mentioned as the possession of khan Jochi, the senior son of Chingiskhan (Tizengauzen, 1941, p.86). It is an obvious mistake as the Volga region was conquered by the Mongols after the death of Jochi. Nevertheless the data given by 'History of Vassaf' can be considered as one more certificate for the early occurrence of city.

Ukek is also mentioned in geographical work of al-Omari – an Egyptian composition of the first half of the XIVth century - with the description of Ulus Jochi territory (Tizengauzen, 1884, p.215 [the Arabic text], 236).

During his wanderings around the Golden Horde in 734 A.H. (1333-1334) the famous Arab traveller Ibn Batuta visited Ukek: 'we went to city Ukaka... – the city of medium size, but beautiful construction, with abundant blessings and a strong cold' (Tizengauzen, 1884, p.302-303). He specified the distance from Saray to Ukek as ten days; as much it took Ibn Batuta himself to get from Ukek to Sudak (see Tizengauzen, 1884, p.303).

Some researchers basing on these facts suggested that there existed the 'second' Ukek - somewhere at the northern coast of the Azov sea; Ibn Batuta passed it on the way from the Low Volga to Sudak (see Brun, 1863, p.138-139; Brun, 1873, p.12-13; Brun, 1878, p.331; Brun, 1879, p.205-207; Brun, 1880, p.277; Lamansky, p.80-83; Lappo-Danilevsky, p.243-244; The book of Ser Marco Polo, Vol.II, p.488). But this point of view was fairly denied by L.L.Golitsyn and S.S. Krasnodubrovsky (Golitsyn, Krasnodubrovsky, p.74-77).

The occasion for doubts that Ibn Batuta passed Ukek which was situated within modern Saratov was his mention of 'Russian mountains' in one-day trip from Ukek (Tizengauzen, 1884, p.303). Probably, it should be understood so that behind the mountains surrounding modern Saratov there were Russian lands; the one-day trip is the distance from Ukek up to these mountains, not up to the territory of Rus of the XIVth century (Golitsyn, Krasnodubrovsky, p.76-77).

Also Ibn Batuta mentioned silver mines, ostensibly, settled in Russia, which is completely wrong, as the searches of silver

ores in Russia began only at the end of the XVth century (Kuzin, p.71). Probably, Ibn Batuta tried to explain the known fact that the tribute from Russia to Ukek was delivered as ingots of silver. In Russia such ingots were passed by the name of grivnas or roubles, and in the Golden Horde - sums or saums, as the traveller himself (Tizengauzen, 1884, p.303) called them.

In the written sources of the second half of the XIVth century Ukek was not mentioned, probably, due to the general decline of the Gold Horde in this period. But nevertheless on the map of the Venetians Francisco and Dominico Pizzigani, made in 1367, the city 'lochahi' was designated, which by the name and location corresponds to the Golden Horde Ukek (Brun, 1873, p.12; Chekalin, 1889, p.17; Tardy, p.182). City 'lochachi', though on the left bank of Volga, is designated on the 1459 map of cosmographer Fra Mauro, which, certainly, reflects the Volga region cities of the XIVth century (Chekalin, 1890, p.248-249; Tardy, p.190). On one of the West European maps of the second half of the XVIth century, obviously made with the help of Fra Mauro's map, city 'locachi' on the left bank of Volga is also designated (Almagia, tab. XXIX).

The following historical information about Ukek is contained in the Persian compositions of the first quarter of the XVth century: 'The Books of Victories' ('Zafar-name') by Nizam ad-Din Shami, who was the official historiographer of Tamerlane, and Sharaf ad-Din 'Ali Yazdi. In these compositions on the History of Timur the authors told about his campaigns against the Golden Horde khan Toktamysh. Among the cities destroyed by Tamerlane in 1395, the Persian historians mentioned Ukek, near which the rests of Toktamysh army were finally defeated (Tizengauzen, 1941, p.121, 178, 185). Nizam ad-Din Shami wrote that Timur 'came to the Ukek region following his enemies... His troops plundered the whole region, taking many riches' (Tizengauzen, 1941, p.121); Sharaf ad-Din also mentioned the 'Ukek region... with all belonging to and concerning it' (Tizengauzen, 1941, p.185). These are unique mentions of Ukek's regions in the sources. The information of Nizam ad-Din Shami and Sharaf ad-Din 'Ali Yazdi allowed the researchers, since G.S. Sablukov (Sablukov, 1884, p.319) to connect the destruction of Ukek to the rout of city by Timur.

In another Persian composition of the beginning of the XVth century – 'Iskender's Anonym' - Ukek was mentioned too. It says that in the XIVth century Ulus Jochi was divided into Kok Orda and Aq Orda. Ukek was mentioned as a possession of the khans of Kok Orda (Tizengauzen, 1941, p.127).

Al-Kalkashandi, the Egyptian author of the XVth century, characterising the administrative division of the Golden Horde, mentioned Ukek within the Crimean province with the capital in Solkhat, and also specified that the Egyptian sultan regularly corresponded with governors of the Golden Horde cities, including Ukek; his information, obviously, dates back to the XIVth century (Polyak, p.34, 57).

Basing on 'Iskender's Anonym', Gaffari, the Persian historian of the middle of the XVIth century, includes Ukek into the structure of Kok Orda (see Tizengauzen, 1941, p.211).

Aali-efendi, the Ottoman historian of the end of the XVIth century, as the previous authors basing on the works of the preceding century, also mentions Ukek (see Smirnov, 1887, p.53-54).

Thus, Ukek is mentioned among the largest Golden Horde cities and regions of the XIIIth-XIVth centuries. Later, since the XVIth century it is described as archaeological monument, and its name is transferred in modern transcription - Uvek. As a whole, after the foundation of Saratov in 1590, Uvek as a large geographical landmark in the Volga region was dropped back to the background; it was not mentioned in the major documents and in traveller's notes.

§ 1.2. The monetary circulation and coin struck of Ukek

The presence of the large numismatic material allows successfully reconstruction of the development of monetary circulation in the cities of the Golden Horde. It was made for the various cities of Ulus Jochi by works of G.A.Fyodorov-Davydov (Fyodorov-Davydov, 1963, 1987), A.G. Mukhamadiev (Mukhamadiev, 1983), S.A.Yanina (Yanina, 1962, 1970) and N.D.Russev (Russev).

However, the numismatic materials of the Uvek site of ancient city were only briefly analysed in the article by G.A.Fyodorov-Davydov (Fyodorov-Davydov, 1963), in which the whole material was not covered, and in the publication of the factual data (Fyodorov-Davydov, 1963, p.194-195), unfortunately, a number of typing errors were made. But the listed drawbacks do not reduce the advantages of the specified work, which in many respects facilitated the writing of the given paragraph, both by way of methodology, and as the source of factual material.

A lot of ancient and medieval pre-Mongolian coins were found on the monument. Concerning the data of B.V.Zaykovsky, 3 antique, 1 Byzantine and 3 West European specimens derived from Uvek (Zaykovsky, 1926, p.43). There are also documentary indications (KZVM, Vol.I, N 514; KZVM, Vol.II NN 2031, 2381) on a copper Greek coin acquired from inhabitants of Naberezhnyy Uvek, on 1 silver and 11 copper 'Greek and Roman coins', found at a ferry, and also on 2 Chinese copper coins. In NMRT a coin of 'ro' type (N 5365-64) found on Uvek site of ancient city is kept. It should be dated as the beginning of the XIth - first quarter of the XIIth century (Anokhin, p.123-124).

Besides the production of the mints of the Golden Horde on Uvek site of ancient city the coins of the XIIIth - XVth centuries: a Hulaguids (?) (Savel'ev, 1880, p.175) and 5 Russian (see chapter II, § 2.7) were found.

All other well-documented finds of coins (1457) refer to the Golden Horde strike.

For the convenience of usage all finds of Jochid coins from the site are shown in Appendix I.

As G.A.Fyodorov-Davydov fairly noted, the monetary circulation in Ukek was set in the XIIIth century (Fyodorov-Davydov, 1963, p.171), in contrast to other Golden Horde cities.

The finds of two copper Bulgar coins with the name of Karakorum kaan Mengu (Munke) who governed in 1251 - 1257 are interesting for researchers.

The percent of coins found on the Uvek site which belong to the period of rule of Mengu-Timur (1266-1282), Tuda-Mengu (1282-1287) and Tula-Buga (1287-1291) is rather high - for silver coins it is 10.6%. At the same time the coins of this epoch were found only in two other large Golden Horde's monuments - on the Bolgarskoe site of ancient city and on the adjoining to it Aga-Bazar site, but the share of silver dirhems of this period on specified archaeological objects does not exceed 3 % (Rudakov, p.126; Fyodorov-Davydov, 1963, p.167).

At khan Tokta (1291-1312) the money circulation in Ukek became even more intensive; Table 1 shows that much more coins of Tokta period were found than coins minted in 1266-1291. It is important to say that from the dated Tokta coins, found on the Uvek site of ancient city, 22 were stroked even before the reform of 710 A.H. (1310-1311), and only 10 - after the reform. At the same time the Tokta coins of pre-reform period were not found in such large sites of ancient cities as Selitrennoe and Tsarevskoe, though the finds of after-reform dirhems of Tokta on these monuments are not numerous as well (Fyodorov-Davydov, 1963, p.167). From all other large cities of Ulus Jochi on the share of silver coins of the period of Tokta reign Ukek concedes only to Bulgar (Fyodorov-Davydov, 1963, p.167), as there a lot of various anonymous dirhems were minted at the end of the XIIIth century (Mukhamadiev, 1983, p.57-58; Fyodorov-Davydov, 1987, p.171-174).

According to our calculations, on the Uvek site of ancient city only a little fewer silver coins of the Tokta period were found than dirhems of Uzbek or Janibek (Tab.1). Such prevalence of Tokta silver coins distinguishes Ukek for development of the monetary circulation from other Golden Horde cities. Basing on such a significant amount of Tokta coins from the Uvek site of ancient city the well-known orientalist P.S.Savel'ev in the middle of the XIXth century assumed that Tokta residence was situated there (Savel'ev, 1858, p.276).

The share of silver coins of Uzbek period in Ukek is 25.2%. It stands near from the relative figures of other large Golden Horde settlements (Rudakov, p.126; Fyodorov-Davydov, 1963, p.167). In other words, the intensity of the circulation of silver dirhems of Uzbek in Ukek was approximately the same as in other Golden Horde cities.

Janibek (1342-1357) silver coins in Ukek are fewer than in other large cities of Ulus Jochi – 25.8%, and their amount is not much bigger than the number of dirhems of Uzbek.

Silver coins of the period of internecine wars of the end of the 50-s - beginning of the 80-s of the XIVth century are represented by 25 items (16.6% of all dirhems). Almost all of them are minted on behalf of the khans who governed in the narrow chronological interval between 1357 and 1367. Dirhems of the end of the 60-s – the 70-s of the XIVth century are represented on the Uvek site by a single item (Kaganbek, 777 A.H.), which obviously specifies the decline of the circulation of the silver coins in Ukek in this period, when old dirhems were gradually replaced by new, lighter ones (Mukhamadiev, 1983, p.101-102).

There are indications only on 3 dated silver coins of Toktamysh, 785-788 A.H. It allows us to speak about the final fading of the circulation of dirhems in Ukek at the end of the 80-s – the 90-s of the XIVth century.

The distribution of copper coins by the periods of striking differs from distribution of silver coins both for Ukek and other cities of Ulus Jochi (Fyodorov-Davydov, 1963, p.171).

Table 1. Distribution of Jochid coins from the Uvek site of ancient city according to the periods of monetary circulation[1].

	silver		copper		metal?		Total	
	abs.	%	abs.	%	abs.	%	abs.	%
Mengu kaan (1251-57)	-	-	2	0.2	-	-	2	0.1
Mengu-Timur, Tuda-Mengu and Tula-Buga (1266-91)	16	10.6	2	0.2	4	0.9	22	1.5
Tokta (before 1310-11)	15	9.9	-	-	7	1.5	22	1.5
Tokta (from 1310-11)	10	6.6	-	-	-	-	10	0.7
Tokta in general (1291-1312)	29	19.2	-	-	13	2.8	42	2.9
Uzbek (1312-42)	38	25.2	145	17.3	42	8.9	225	15.4
Janibek (1342-57)	39	25.8	458	54.7	208	44.4	705	48.4
Khans of the period of internecine wars (1357-80)	25	16.6	229	27.4	197	42.1	451	31
Toktamysh (1380-96)	4	2.6	2	0.2	4	0.9	10	0.7
Total	151	100	838	100	468	100	1457	100

[1] Here and later the anonymous emissions issued during the reign of these khans are taken into account as well.

The active circulation of copper coins in Ukek began only in the reign of khan Uzbek (1312-1342), as their striking in the Golden Horde of the XIIIth - beginning of the XIVth century was sporadic.

Unlike the silver coins, the found copper ones usually belong to Janibek period. This fact pulls together the Uvek site of ancient city with Bolgarskoe and Selitrennoe (Rudakov, p.126; Fyodorov-Davydov, 1963, p.167). The share of copper coins of 1357-1368 in Ukek is 27.4%, that is a rather high figure which makes a concession only with the data of Saray al-Djedid and Mokhsha and is approximately equal to the same parameter of Bulgar (Rudakov, p.126; Fyodorov-Davydov, 1963, p.167). Hence it is obvious that the active circulation of copper coins in Ukek proceeded in the period of roughcast recession of the dirhem circulation. That was noticed by G.A. Fyodorov-Davydov for many monuments of the Golden Horde period (Fyodorov-Davydov, 1963, p.173-174).

The distribution of numismatic material from the Uvek site of ancient city on mints is given in Tab. 2.

For silver dirhems it is necessary to note a rather low percentage and insignificant prevalence of production of the Saray al-Djedid mint (25.7%), functioning most heavily during the Janibek reign. Janibek dirhems in Ukek are fewer than in many other Golden Horde cities. A significant role in the monetary circulation in the beginning of the XIVth century was played by the Ukek dirhems minted in the Tokta period. The percentage of Mokhsha coins (both dirhems and puls) is rather high too. According to A.A.Krotkov, in the beginning of Uzbek government the centre of ulus was transferred from Ukek to Mokhsha (Krotkov, 1927, p.76-77).

Among the copper coins the following mintage prevails: Saray (13.4%), Gulistan (21,6%) and, especially, Saray al-Djedid (58,7%). Such a significant prevalence of puls of Saray al-Djedid mintage which is not specific for provincial Golden Horde cities, is obviously explained by the closeness of Ukek to Saray al-Djedid which was the main centre of coin striking in the reign of Janibek. The circulation of puls in Ukek was the largest at this period.

The advanced monetary circulation in the city is proved by the finds of hoards of Jochid coins. 11 of them were found on the site, but only three are well documented: of dirhems with latest coins of 764 A.H., of puls with latest coins of the 1330-s and 764 A.H.

The monetary circulation in the Golden Horde city Ukek allows to follow the basic stages of its development. The finds of kaan Mengu coins speaks about settling of some part of Ukek already in the 50-s of the XIIIth century. The period of the most active life of the city, according to numismatic material, occupies the century from the 70-s of the XIIIth century up to the 60-s of the XIVth century. At the end of the XIVth century the circulation of Jochid coins in Ukek stopped completely.

Also it is interesting to study the mintage of copper and silver coins in Ukek. This fact of monetary striking speaks about the large political importance of the city.

Up to the last decades the study of monetary coinage in Ukek was rudimentary. At present there is no complete code of all known types and items of Ukek coins. That's why the description of all known coins stroked on the mint of Ukek is given below. This description does not imply total completeness (some of these types have a number of variants, which will not be described separately).

Silver coins

Type 1 (32 items). The most studied type of Ukek dirhem is described by Ch.M.Fraehn (Fren, p.5, N 27, tab. I, N XVI; Fraehni, p.199, 649, N 6), P.S.Savel'ev (Savel'ev, 1858, p.278-280, NN 506-507, 509), S.A.Yanina (Yanina, 1960, p.215, N 10a), G.A.Fyodorov-Davydov (Fyodorov-Davydov,

Table 2. Distribution of Jochid coins from the Uvek site of ancient city according to the mints.

	Silver		copper		Metal?		Total	
	abs.	%	abs.	%	abs.	%	abs.	%
Saray	36	27.3	104	13.4	19	5	159	12.3
Saray al-Makhrusa	14	10.6	2	0.3	3	0.8	19	1.5
Saray al-Djedid	34	25.7	457	58.7	205	54	696	54
Gulistan	20	15.1	168	21.6	130	34.3	318	24.7
Ukek	8	6.1	-	-	6	1.6	14	1.1
Mokhsha	6	4.5	16	2.1	-	-	22	1.7
Bulgar	5	3.8	7	0.9	1	0.3	13	1
Bardzhin	-	-	12	1.5	9	2.4	21	1.6
Madzhar	1	0.8	-	-	-	-	1	0.1
Crimea	-	-	3	0.4	-	-	3	0.2
Azak	5	3.8	4	0.5	6	1.6	15	1.2
Khorezm	2	1.5	5	0.6	-	-	7	0.5
Tebriz	1	0.8	-	-	-	-	1	0.1
Total	132	100	778	100	379	100	1289	100

1980, p.58, N 2) and A.Z.Singatullina (Singatullina, 1985-2, NN 251-254; Singatullina, 1998, p.63-64, 87, tab.20, N 250). Seven items are kept in SOMK[1], 5 are described in the SUAK documents (Archives of SOMK, fund 85, inventory 1, file 177, p.9), the same coin is mentioned in the inventory book of GIM (GIM. Department of numismatics. Oriental coins. The inventory book N 1, p.99, N 91554/520966); 10 items from the collection of GE[2] are taken into account. They have been not described in the work of A.Z.Singatullina.

Obverse. In a round threefold linear dot and linear framework there is an inscription: 'The Sultan / supreme Giyyas/ *Toktogu*/ fair, long life to him'[3].

Reverse. In a double round dot and linear framework there is a legend: 'There is no god, except / Allah, Mohammed is an envoy / of God. Coinage of / Ukek' (fig.14,*1-5*, 15-26).

On some coins of this type (fig.14,*1,4-5*, 16) on reverse there is an additional line with the date - 706 A.H. (1306-07) or 707 A.H. (1307-08)[4].

Weight: 0.73g, 0.84 g - 2 items, 0.96g, 1.07g, 1.08g, 1.09g, 1.19 g, 1.21 g, 1.22 g, 1.24 g - 2 items, 1.28 g, 1.29 g - 2 items, 1.30 g, 1.31 g - 2 items, 1.35 g - 3 items, 1.36 g, 1.37 g, 1.40 g - 3 items, 1.42 g, 1.43 g - 2 items, 1.44 g, 1.45 g - 2 items, 1.47 g, 1.49 g - 3 items, 1.50 g, 1.51 g, 1.53 g - 3 items, 1.55 g - 2 items, 1.60 g, 1.61 g - 2 items.

Type 2 (23 items). It was examined in the work of A.Z.Singatullina (Singatullina, 1985-2, NN 248-250), however for the first time in the integral form it was published by Yu.E.Pyrsov (Pyrsov, 1988, p.186-188, fig.1,*1-5*). The type is mentioned in the documents of SUAK (Archives of SOMK, fund 85, inventory 1, file 177, p.10); one dirhem is kept in SOMK (N SMK 14555, D1-257).

Obverse. In square-like framework of four braces inscribed in a round dot framework: 'Coinage of / Ukek'. On the majority of coins on this side there is also a figure - 6 or 7 (fig.14,*7-12*).

Reverse. In a round dot framework there is a legend: 'Eternal glory and accompanying honour' (fig.14,*5-15*).

Weight: 0.85g, 1.08 g, 1.11 g, 1.13 g - 2 items, 1.16 g, 1.27 g, 1.29 g, 1.33 g - 2 items, 1.36 g - 3 items, 1.37 g, 1.42 g, 1.43 g, 1.45 g - 2 items, 1.50 g, 1.54 g, 1.68 g.

Type 3 (9 items). Two items are known by works of A.Z.Singatullina (Singatullina, 1985-2, N 255; Singatullina, 1998, p.87, tab.20, N 252); two more coins allowed Yu.E.Pyrsov to read partially an inscription on obverse (Pyrsov, 1988, p.188-189, fig.2,*6-7*).

Obverse. In a round dot framework in the middle there is a word 'Ukek' (top and bottom parts of the field are not clear).

Reverse. As reverse of the type 2 (fig.14,*16-18*).

Weight: 1.16 g, 1.47 g, 1.50 g, 1.57 g, 1.62 g, 1.66 g, 1.67 g, 1.72 g., 1,73 g, 1.75 g.

Type 4 (1 item). The type is allocated by Yu.E.Pyrsov (Pyrsov, 1988, p.189, fig.3,8). Without the indication of the place of striking, but typological affinity of the coin reverse with types 2 and 3 is obvious.

Obverse. In a round dot framework there is a legend: 'Tokta / fair'.

Reverse. As reverse of the type 2 (fig.14,*19*).

Weight: 1.47g.

Type 5 (4 items). One coin is kept in the funds of SOMK (N SMK koll.019), the other three are from the former collection of Yu.E.Pyrsov; two coins were stroked at Ukek dirhems of type 2.

Obverse. In a round dot framework there is a legend: 'Coinage / Tokta khans / fair in / city Ukek'.

Reverse. In a round dot framework there is a cartouche as a six-point star, in it there is an inscription: 'Power to God and his messengers' (fig.14,*20*).

Weight: 1.33 g, 1.58 g., 1.73 g.

Type 6 (2 items). One of them is kept in the funds of SOMK (N DN 0168); the figure is kindly given by Yu.E.Pyrsov.

Obverse. In square-like framework of four (?) braces entered in a round dot framework: 'Coinage of / Ukek'.

Reverse. The image of a predator and sun behind its back (fig.14,*21*).

Weight: ?

Type 7 (3 items). It is dated as 700? A.H. (1300-1301?). One coin is kept in the funds of SOMK. Two similar dirhems, being stroked at the coins of earlier issues, possibly Ukek coins of type 3, are described in the inventory book of GIM (GIM. Department of numismatics. Oriental coins. The inventory book N 2, p.201, NN 18470-18471).

Obverse. In a round dot framework there is a legend: 'Tokta khan / fair. Coinage of / Ukek in (year) 700 (?)'.

Reverse. An inscription: 'There is no God, except / Allah, Mohammed / an envoy of God ' (fig.14,*22*).

Weight: 1.19 g, 1.45g.

Type 8 (7 items). The description is given in the work of A.K.Markov (Markov, p.531, NN 33-34): Makhmud ben

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1 N SMK 14655/D-359, 14656/D-360, 14796, 14802, C-02.

2 NN 15308-15312, 15365, 15586-15589.

3 Here and further underlined words mean the translation from the Uighur graphics, not underlined – the translation from the Arabic graphics.

4 The date given by P.S.Savel'ev –711 A.H. – is really doubtful.

Mohammed ben Timur (khan of the Great Horde in 1459-1465), Ukek, without date. Now these three coins are kept in GE (fig.27-30)[5]. Three more coins with similar definition are mentioned in the inventory book of the Department of Numismatics of GIM (GIM. Department of numismatics. Oriental coins. The inventory book N 2, p.184-185, NN 18009-18011). One more such coin was in the hoard from Ay-Vasil' in the Crimea (Kramarovsky, 1995, p.26; Kramarovsky, 2001, p.120).

Weight: 0.40g, 0.56g, 0.65g, 0.73g, 0.79g, 0.80g.

A significant chronological gap between the period, earlier determined by us as the time when Uvek site was a significantly inhabited settlement (1250s - 1390s) and the dating of the seven coins described (even if we admit that Ukek is mentioned on them, though it seems doubtful) made us to assume that the place of striking on the last ones does not mean the city but is a toponym - the name of the neighbourhood territory of the already disappeared Golden Horde city. Indirectly it is proved by the fact that as the toponym Uvek was already mentioned in the XVIth century in 'Kazan History' (*Kazanskaya istoriya*, p.66) and Lebedevskaya chronicle (*Polnoe sobranie russkikh letopisey*, T.XIII, p.305; *Polnoe sobranie russkikh letopisey*, T.XXIX, p.268-269) - Russian written sources of the middle of the 60-s of the XVIth century and also in 'The Letter of Prince Urus to Tsar Fedor Ivanovich', written in 1586 (Pekarsky, p.239).

Copper coins

Type 1 (18 items). Almost all known items are published by Yu.E.Pyrsov (Pyrsov, 1992; SOMK N SMK 53578/aN-75, koll.20).

Obverse. In a round linear framework there is an inscription: 'Aymak / Ukek' – by Yu.E.Pyrsov, or 'Coinage of / Ukek ' - by A.G.Mukhamadiev (Mukhamadiev, 1986, p.28).

Reverse. In a round linear framework: 'The Rate / of khan' - by Yu.E.Pyrsov, or 'The Sultan / Nasreddin' - by A.G. Mukhamadiev (fig.14,*23*).

Weight: 0.78 g, 1.02 g, 1.05 g, 1.08 g, 1.09 g - 3 items, 1.11 g, 1.14 g - 3 items, 1.21 g, 1.31 g, 1.32 g, 1.39 g.

Type 2 (5 items). Two coins are kept in the funds of SOMK (N koll.120), two – in former collection of Yu.E.Pyrsov, one more was found during investigations of D.G.Barinov (Barinov, 1997-1, p.183-184, fig.1,*9*).

Obverse In a round dot framework there is a legend: 'Coinage of / Ukek'.

Reverse In a round dot framework an unclear Arabic inscription (fig.14,*24*).

Weight: 1.18g, 1.34g.

The absence of 'Batu's tamga', so characteristic for the coins of the XIIIth century of the other cities of the Ulus Jochi, at all coins of Ukek strike is remarkable.

Despite the presence of tens items of Ukek coins in museums collections, the researchers have at their disposal a rather small amount of well-described finds; all of them occur from the pool of Volga (fig.31,*3*)[6] .

Dirhems of type 1 were found: at Uvek site of ancient city - 9 items, at the Bolgarskoe site of ancient city - 2 items (Fyodorov-Davydov, 1963, p.199, N 448; Fyodorov-Davydov, 1987, p.199), in the area of Korol'kova's summer residence in modern Saratov (see chapter III, N 13), near the village Kulikovka of Khvalynsky uezd - 1 item (Fyodorov-Davydov, 1963, p.193, N 396), in a hoard from the Selitrennoe site of ancient city - 1 item (Fyodorov-Davydov, 1980, p.58, N 2) and from village Sosnovka of Kazan uezd - 1 item (Fyodorov-Davydov, 1960, p.168, N 197). The finds of silver coins of type 2 are known: from vicinities of Khvalynsk - 5 items (Pyrsov, 1988, p.186), from the Bolgarskoe site of ancient city - 1 item[7], from the village Evlashevo of Saransky uezd of Penza gubernia - 1 item (Fasmer, 1929, p.299, N 11; Fyodorov-Davydov, 1963, p.197, N 441), from the settlement near the village Sovetskoe of Saratov region (see chapter III, N 53); 2 items (fig.14,*13-14*) were found in 1991 during excavations of burial ground 'Mayachnyy bugor-I' in Krasnoyarsky area of Astrakhan region (Vasil'ev, 1994, p.48) - in burials N 105 and 107 (in some other burials the coins of other cities minted in the 1270-s – 1320-s were found also)[8]; 5 other coins (on 2 of them the prints of dies are not clear) were found in 1995 in the burial 51 of the burial ground 'Mayachnyy bugor-II' together with a dirhem, which can be related to the anonymous coinage of Khorezm 686-690 A.H. (Vasil'ev, 1998, fig.5,*6-11*; Koten'kov S.A. Otchet, fig.203,*1-6*). Dirhems of type 3 were found: in vicinities of Khvalynsk - 1 item, at the Mayachnyy II burrial ground in 1991 (burrial 3) - 1 item[9], at the village Krasnyy Yar of Staropoltavkinsky area of Volgograd region - 1 item (Pyrsov, 1988, p.188) and near village Nikol'skoe of Kuznetsky area of Penza region. The silver coins of type 8 were found in three hoards of the XVth century: near the village Bol'shoy Shikshi-Oluyaz of Mamadyshsky uezd - 5 items, near Kazan city - 3 items (Fyodorov-Davydov, 1960, p.167-168, NN 189, 195) and near Ay-Vasil' in the environs of Yalta (Kramarovsky, 1995, p.26; Kramarovsky, 2001, p.120). Dirhems of Ukek striking (without the indication of type and without the dates probably relating to types 1 and 2) were found in Uvek - 3 items and Tsarevskoe - 1 item sites of ancient cities and also near the village Petropavlovka of Vol'sky uezd – 1 (?) item, and near from the present village Kurdium of Tatishchevsky area of Saratov region - 1 (?) item (Krotkov, 1923, p.29; Fyodorov-

[5] Department of Numismatics, NN 24688-24690. According to G.A. Fyodorov-Davydov and A.G.Muhamadiev these coins do not allow us to say that in their inscriptions Ukek is mentioned.

[6] The exeption is only one dirhem of type 8, found in hoard in Crimea. This find didn't shown at fig.31,*3*.

[7] BGIAZ N 91-12.

[8] AMZ NN KP 42234/7, N 30039, KP 42234/10, N 30041.

[9] AMZ N KP 41953.

Davydov, 1963, p.193, N 397).

Puls of type 1 are known from Mokhsha - 4 items (Krotkov, 1930, p.41, tab.II,*43-44*)[10], Nikol'skoe settlement at Kuznetsky area of Penza region – 2 items, from vicinities of Saratov - 2 items, from Sharenyy Bugor in Astrakhan region[11] and from career of Vol'sky cement factory - 9 items (Pyrsov, 1992, p.107) and from the settlement near the village Sovetskoe of Saratov region, where a pul of type 2 was found too (Barinov, 1997-1, p.183-184, fig.1,*9-10*).

Dirhems of types 1, 4-5 and 7, even those of them that have no dates, have precise chronological binding due to mention in their legends of the name of khan Tokta (1290-1312). The dating of anonymous coins of Ukek striking is a difficult and not solved question yet.

The most numerous type of anonymous dirhems (type 2) according to weight norms of striking reveal almost the same picture as the nominal type 1: the peak of the weight diagrams is necessary for 1.3-1.5 g (fig.31,*1-2*), that coincides with the weight of silver coins made in Ulus Jochi at the end of the 80-s – the 90-s of the XIIIth century (Mukhamadiev, 1983, p.55-56, fig.6; Fyodorov-Davydov, 1987, p.170-171, fig.30-31). About the circulation of the given type of dirhems at the pointed time is also confirmed by the presence of 2 coins of type 2 recoinaged by dies of Tokta khan time (type 5) and also the find of similar dirhems in one of the burial complex with a Khorezm coin of 686-690 A.H. So, basing on the presence of figures 6 or 7 on the obverse of the type 2 coins we can assume that the given type was minted in 686-687 A.H. (1287-1289) or in 696-697 A.H. (1296-1298).

Chronology of dirhems of types 3 and 6 and also puls of both types is more complex. Probably they were minted in 1266-1312, i.e. within Tokta reign and his predecessors. It is possible to assume, basing on the information on two coins of type 3 recoinaged with Tokta dies in 700 A.H., that the given type was in circulation up to the beginning of the XIVth century. In any case, all researchers of Ukek coins converge in one – striking of the Golden Horde coins in the city stopped, probably, not later than 710-712 A.H. (1310-13). We can connect this fact with either of two known historical events: with the monetary reform of Tokta khan, when striking in Ukek may have been stopped as unnecessary, or with the political History of the Ulus Jochi - Uzbek khan, who took the course of quick islamization of all the highest ranks of Golden Horde society just after his accession to the throne in 1312, evidently could not resign himself to the supremacy in Ukek of the Mongol elite issuing coins not with Arabic, but with Uighur inscriptions.

[10] Information about 2 coins from Mokhsha and about all finds from Nikol'skoe settlement is given by V.A.Vinnichek.

[11] AMZ N 5528/1.

Chapter II.

ARTICLES OF MATERIAL CULTURE FROM THE UVEK SITE OF ANCIENT CITY

§ 2.1. Wearing-apparel components

Belt set is an interesting archaeological source. Due to a rather fast change of style with certain of its kinds, many details of a belt set are rather precisely dated; it is possible to follow the backgrounds of this or that type of articles.

The details of belt set used in the given paragraph are kept in the funds of SOMK and NMRT. They have been obtained in the last quarter of the XIXth - beginning of the XXth century as a result of excavations, purchases at the inhabitants of the village Uvek and finds on the Uvek site of ancient city, made by the members of SUAK and Society of Archaeology, History and Ethnography of Kazan University.

Only details of a belt (silver clasps, belt rings, brackets and tips of belts), found in the grave 4 in mausoleum excavated by P.N.Shishkin in 1913, were partially included into the research literature (Krotkov, 1915, p.124; Fyodorov-Davydov, 1966-2, p.47; Kramarovsky, 1991, p.262; Kramarovsky, 2001, p.41-42, fig.16), other articles of belt sets found in the burials (excavations of F.V.Ballod, 1919) and occurring from the finds at the site of ancient city are included into research literature for the first time. As the large part of articles is casual finds, we refer some of them to considered categories of belt sets only presumably.

Classification of details of belt sets was made using G.A.Fyodorov-Davydov's system of processing the medieval monuments of material culture (Fyodorov-Davydov, 1966-2).

For functional purpose there are following categories of a belt set: girdle clasps, brackets and stripes, belt rings, tips of belts. Inside each category the articles are allocated into groups and units - concerning the material and engineering of manufacturing, into departments and types – concerning the characteristics of the contrivance, form or ornaments.

Girdle clasps. The articles of the given category are submitted by three groups: silver, bronze and clasps of alloys of non-ferrous metals. Under the form of the contrivance for connection girdle clasp with a belt three groups are allocated:

A - The belt is linked with girdle clasp through an axis making one whole with the framework, on the same axis the catch is put;

B - The belt is linked with girdle clasp through the rectangular receiver;

C - The belt is linked with girdle clasp with the help of dashboard, rotating on the same axis, on which the catch is put.

Concerning the form of the framework girdle clasps are divided into the following types.

Group 1. Silver.

Section A.

Type I (1 article). Rectangular frame (fig.32,*2*), in section trapezoid, on the fore part of the framework there are four semicircular decorative collections.

Another one silver girdle clasp from mausoleum was distinguished by G.A.Fyodorov-Davydov in a special group (Fyodorov-Davydov, 1966-2, p.47). The girdle clasp (fig.32,*1*) consists of two parts. Each part has a rectangular framework for connection with a belt and a disk-like plate. The plate with the platen on an edge has a cut in the middle where enters another disk like a plate of a smaller size. On the frameworks and the smaller disk - stroked vegetative ornament of deciduous and flower motives. Two similar bronze girdle clasps are known: in nomadic burial at Tiraspol' and Novgorod in the layer of the 30-s – the 70-s of the XIIth century (Sedova, 1981, p.145-147, fig.57,*4-5*; Fyodorov-

Davydov, 1966-2, p.47). A clasp with similar details was found in Belorechenskie barrows (Levasheva, 1953, p.196, fig.10,*1*). A similar scheme of fastening of silver girdle clasps was found in ethnography of the Yakuts (*Narody Sibiri*, p.282, fig.3).

Group 2. Bronze.

Section A.

Type I (1 article). Oval framed (fig.33,*2*) with the narrow rectangular receiver, in section trapezoid.

Type II (1 article). Under-triangle framed (fig.33,*3*) with the narrow rectangular receiver, in section trapezoid. The exact analogy of the girdle clasp of the section A under the form and size is found on the Vodyanskoe site of ancient city, in the area of buildings dated as the 30-s – the 60-s of the XIVth century (Egorov, Poluboyarinova, p.77, tab. II,*5*).

Section B.

Type I (1 article). Circle framed (fig.33,*4*); the framework is made of round in section wire, narrowed in the back part. The catch is short, slightly projecting from the edge of the girdle clasp; it consists of two parts. The top, with a sharp catch flat, in the middle with oval side ledges having slotted ornament, clenched to a narrow plate which bends around a framework. The dashboard is circle, folded through the framework; on the dashboard there is also a slotted ornament. The analogies are not known for us. According to M.G. Kramarovsky, the girdle clasp can be referred to the epoch of the Middle Ages.

Separately we allocate the girdle clasp – belt separator (fig.33,*5*) - cast bronze flat framework of the trapezoid form; in the middle - four square apertures located in pairs, wide end of the framework is W-figurative, on the narrow end there are two lozenge short ledges. The similar articles are known from the monuments of the Volga Bulgaria of the XIIIth – XIVth centuries[1] and the Vologda region of the XIIth – XIIIth centuries (Nikitin, 1974, p.105, fig.37,*8*).

Group 3. Of alloys of non-ferrous metals.

Section A.

Type I (1 article). Rectangular framed (fig.33,*1*), with sharp fore part, in section trapezoid. The rest of cloth belt remains on it (The results of this cloth sample analyses along with the analyses of silk brocade cloth are available in Appendix 3)[2]. Girdle clasp was found together with a belt ring (fig.33,*6*) in a crypt (excavations of F.V.Ballod, 1919, grave 1) above hipbones of the buried (Ballod, 1919, p.13, tab.3,*2*; Ballod, 1923-1, p.75-76). The crypt is probably synchronous with the next one, which concerning the material (Ballod, 1919, p.11-14, tab.3,*3-6*; Ballod, 1923-1, p.76-77, tab.19) can be dated as the end of the XIIIth - beginning of the XIVth century.

Brackets and stripes on a belt. The articles of the given category are not only submitted in large number, but also are extremely various by form. Brackets and stripes from the Uvek site of ancient city are divided into five groups according to the material: silver, bronze, iron, bone, stone. By the technique of manufacturing four units are allocated: cast, repousse, cut out from a sheet of metal, cut out from bone and stone. Concerning the features of the contrivance the articles of the section A - without a loop, and section B - with a loop are allocated. The types are allocated under the form.

Brackets. They were attached to the belt with the help of internal prongs; some were linked with the use of metal plates located at the ends of prongs. Sometimes were linked with the help of nails with flat or figured heads.

Unit 1. Cast.

Group 1. Silver.

Section A.

Type I (6 articles). Square (fig.32,*3*), flat, with an entered relief rhombus, inside which a chased vegetative ornament with flower motive is executed.

Type II (1 article). Rectangular (fig.32,*4*), ends as a brace, flat, in the middle the relief rhombus, inside which a chased vegetative ornament with flower motive is executed.

Section B.

Type I (2 articles). Trapezium-like (fig.32,*6*), along the long parties figured quirk, the narrow end is made as a brace, the loop is soldered to the bottom basis; with strike of vegetative ornament with floral motive.

The silver brackets and smaller disk girdle clasp, and also tips of belts (see below) from the crypt of Uvek by separate elements of the forms and decorum (flowers, retouched strokes, thickness of articles and quality of their furnish) and construction of the composition on a principle of mirror symmetry are close to details of a belt set of the XIIIth century from Samarkand (Buryakov, Kramarovsky, p.260-262). In its decorum, in opinion of the researchers, connections of Central Asia with Iran are reflected (Buryakov, Kramarovsky, p.263).

Group 2. Bronze.

Section A.

Type I (1 article). Under-square (fig.34,*1*) with round corners.

Type II (2 articles). Under-rectangular (fig.34,*2-3*): narrow, triangular in section, and narrowed wide, curved, with relief stylised image of the dragon. Brackets with the image of the dragon, similar to the second one, are available in the Golden Horde materials of the Bolgarskoe site of ancient city

[1] NMRT N 5363-22, AA49-49; N 5378-20; N 5428-8.

[2] Analyses were made in the Centre for Historical and Traditional Technologies of the Russian Scientific-Research Institute of the Cultural and Natural Heritage by O.V.Orfinskaya, O.B.Lantratova, V.P.Golikov and A.D.Aliev, to whom author expressed his gratitude.

(Vysotsky, tab.IV,*20*; Polyakova, 1996, p.212, 221, fig.68,*5*) and Laishevskoe settlement (Rudenko, 1998-2, p.26, fig.2,*22*). They are also known in finds from Novgorod. These finds are dated as the XIIIth – XIVth centuries (Bocharov, fig.92-93; Sedova, 1981, p.163-165, fig.66).

Type III (1 article). Rhombic (fig.34,*4*), with stylised image of the dragon (remained fragmentary). The closest analogies to this type are available in Novo-Kumaksky burial ground, where similar articles are dated as the 2nd half of the XIIIth - 1st half of the XIVth century (Kriger, p.181, 185, fig.9,*3-4*), and also in the Golden Horde materials from the Bolgarskoe site of ancient city (Polyakova, 1996, p.212, 221, fig.68,*6*).

Type IV (1 article). Heart-shaped (fig.34,*5*), with the waybill ornament. Heart-shaped brackets are known in materials from Khorezm of the XIIth – XIIIth centuries (Nerazik, p.108, fig.61,*1-8*).

Type V (3 articles). As multipetal rosette (fig.34,*6-8*).

Variant a. Six petal rosette with an aperture at the centre and in each petal (fig.34,*7*).

Variant b. Eight petal rosette with a relief bordering of petals and centre (fig.34,*6*).

Variant c. Eight petal large rosette, petals with openwork edges. At the centre the superimposed image of an animal with the head turned to the left, to the back and tail, thrown for the back, bordered by a tape of small round elements. The image is attached with the help of three prongs (fig.34,*8*).

The first bracket finds analogies in the Volga Bulgaria (Valeev, Valeeva-Suleymanova, fig.18,*11*), typologically related open-work articles are known in the Volga region (Arzyutov, 1929, p.7, fig.7; Mamontov, Sitnikov, 1993, p.199-200, fig.8,*4*; Polyakova, 1996, p.212, 221, fig.68,*20*; Fyodorov-Davydov, 1966-2, p.49, fig.8, I VI; Fyodorov-Davydov, 1994, p.192, fig.42,*12*), at Don (Kyzlasov, 1980, p.95, fig.8,*4*), Northern Caucasus (Nagoev, p.159, fig.1,*16-17*) and in Scandinavia (Gottenrot, tab.28,*18*) in materials of the XIIIth - XIVth centuries. The second article, probably, was made concerning the example of more realistic large badges with an eight petal rosette. In its central field an image of a wolf or a fantastic animal is settled down; such badges were found in Central Asia in the burials of Mongol warriors of the beginning of the XIVth century (Maksimova, p.86, tab.1,*1*; Pugachenkova, 1967, p.255, fig.3,*1-2*). The third bracket which could serve also as the ornament of bag, finds analogies in Novgorod in a layer of the end of the XIVth century (Sedova, 1981, p.162, 167, fig.64,*10*) and in materials of the Narovchatskoe site of ancient city (Lebedev, p.10; Polesskikh, 1956, p.92, fig.38,*2*).

Type VI (2 articles). With vegetative motive (fig.34,*9-10*).

Variant a. As a shoot (fig.34,*9*).

Variant b. As a four petal rosette and stylised petals (?) with a thickening at the end (fig.34,*10*). This bracket was found in Uvek in 1991 in the destroyed building dated by coins of the 20-s - 30-s of the XIVth century. It has rather close parallels in Vym's burial grounds, functioning in the XIth – XIVth centuries (Savel'eva, 1987, p.138, fig.36,*21*), in the Volga Bulgaria (Rudenko, 1998-2, p.27, fig.4,*57*), in Novgorod of XIV-XV centuries (Rybina, p.222, fig.22,*2*) and in materials from the Saratov region[3]; typologically related bronze brackets were found in burial 94 of burial ground Mayachnyy Bugor-1 in the Astrakhan area dated by Saray coin of Tokta of the boundary of the XIIIth - XIVth centuries.

Type VII (8 articles). Zoomorphic (fig.34,*11-13,33*).

Variant a (1 article). A bracket in the form of 'tortoise' (fig.34,*11*). Similar ones were found in the Bolgarskoe[4] and Selitrennoe (Fyodorov-Davydov, 1984, fig.100,*15*) sites of ancient cities, Laishevskoe (Rudenko, 1998-2, p.26, fig.2,*28*; Rudenko, Shaykhutdinov, fig.XXV,*3*) and V Semenovskoe (Kazakov, 1988, p.80, fig.4,*17*) settlements, on the settlement Iskra (Makarov, 1984, p.105, fig.7,*2*) and on Loemsky burial ground of the XIIth – XIVth centuries (Savel'eva, 1972, tab.8,*3*, 19).

Variant b (2 articles). Brackets in the form of stylised bull head (?), face (fig.34,*12*), with one or two longitudinal flutes in the middle. The articles of this type were found in the Volga-Kama region: at the Bolgarskoe site of ancient city in the Golden Horde layer (Polyakova, 1996, p.208, 220, fig.67,*24-25*)[5] and at I Semenovskoe settlement of the 2-nd half of the Xth - XIIIth century (Kazakov, 1991, p.130, fig.44,*28*). The prototypes of the given articles obviously were Central Asian brackets of the IXth - Xth century (Evtyukhova, 1957, p.209, fig.5,*6*; Kyzlasov L.R., p.168, fig.12,*7-8*).

Variant c (5 articles). Brackets as stylised image of the animal head with branchy horns (deer or elk?), face (fig.34,*13*) and article with similar motive (fig.6,*33*). Analogies were found in materials of Laishevskoe settlement (*Arkheologicheskaya karta Tatarskoy ASSR. Predkam'e*, p.191, tab.XVII,*7*), Cheremshansky burial ground in the Saratov region and the Bolgarskoe site of ancient city (Berezin, fig.14; Polyakova, 1996, p.208, 220-221, fig.67,*45*)[6].

Type VIII (3 articles). Complex figures (fig.34,*14-15*).

Variant a. A bracket with two triangles at the ends and a circle with an aperture in middle (fig.34,*14*).

Variant b (2 articles). With open-work edges, in the middle there are three cuts of three petals (fig.34,*15*). The same bracket was found in Mari Volga region on the Yul'yal'sky burial ground of the XIVth - beginning of the XVth century (Nikitin, 1992, p.164, fig.3,*4*). Open-work girdle clasp, closed by style to examined articles, is found in Novgorod, dated as

[3] SOMK without inventory N. Saratov State museum of Art, named after A.N.Radishchev (from environs of village Kondakovka).

[4] NMRT N 5363-24.

[5] NMRT N 5363-26, AA20-12, N 7719-13, Bul. 10334.

[6] NMRT N 7719-12, AA20-14, N 7719-?. A similar ornamental bracket hailed from Bulgarian Izmerskoe settlement (investigations of E.A.Begovatov).

the 20-s of the XIVth century (Sedova, 1981, p.146-147, fig.57,*16*), also stylised similar brackets were found on the Bolgarskoe site of ancient city[7], on Laishevskoe (Rudenko, 1998-2, p.26, fig.2,*41*; Rudenko, Shaykhutdinov, fig.XXV,*5*), Hmelevskoe I[8] settlements and on the settlement near village Sovetskoe (Barinov, 1997-1, p.184, fig.1,*5*).

Section B.

Type I (1 article). Round (fig.34,*16*), with the cast animal image on the right with the head turned to the back, and tail thrown for a back, surrounded with a ring of small convex rectangulars; below there is a broken round loop. Openwork cast brackets with the image of animals from Novgorod materials dated from the boundary of the XIIIth - XIVth centuries up to the middle of the XVth century (Sedova, 1981, p.165, 167). The animal is similar to the images from rings of North West Russia of the XIIIth – XIVth centuries (Sedova, 1981, p.138; Spitsyn, 1899, tab.VI,*8*), from bronze belt holder from the Tsarevskoe site of ancient city[9] and from the figured brackets of the end of the XIVth century (fig.6,*8*; Sedova, 1981, p.162, fig.64,*10*); the similar images are seen on bronze suspension brackets of Viking epoch (Hall, p.59, fig.60). The analogy is known in Siberian materials of the XIIth - XVIth century (Levasheva, 1950, p.350; Pignatti, tab.V,*4*).

Type II (3 articles). Zoomorphic (fig.34,*17-19*), as stylised image of an animal head, with a loop below. The first bracket (fig.34,*17*) has analogies in materials of the Volga Bulgaria (Vysotsky, tab.VI,*23*; Polyakova, 1996, p.212, 221, fig.68,*19*)[10]. One of the articles (fig.34,*19*) has two loops on the end. The similar brackets are known from the Bolgarskoe site of ancient city[11]. The articles similar to the given type, with clamped animal horns also are known in Bulgar materials of the XIIIth – XIVth centuries (Valeev, p.96, fig.36,*5*; Valeev, Valeeva-Suleymanova, fig.26,*3*; Polyakova, 1996, p.208, 220-221, fig.67,*46*; Rudenko, 1998-2, p.26, fig.2,*29*; Starostin, Kazakov, p.139, fig.6,*9*)[12], from Cheremshansky burial ground (Archives of IIMK, fund 1, 1913, file 45, p.69-70, fig.30) and from the settlement at the village Podgornoe in the Ukek district[13]; tips of belts with such motives were in Novgorod in the 1st half of the XIVth century (Sedova, 1981, p.146, fig.57,*17*) and in Bolgar (Polyakova, 1996, p.203, fig.66,*43*)[14].

Type III (1 article). Figured (fig.34,*20*), as wide shamrock, one end of which is like a brace, on the other end there is a broken loop. Similar Golden Horde articles are known from the territory of the Volga Bulgaria (Polyakova, 1996, p.212, fig.68,*14*; Rudenko, 1998-2, p.26, fig.2,*39*)[15] and Low Volga region (Polyakova, 1996, p.221; Kriger V.A. Otchet o raskopkakh v 1985 godu, fig.28, 81,*4*)[16]. The same bracket was found in the North West Kazakstan in nomadic burials with a latest coin of 20-s of the XIVth century (Kadyrbaev, p.43, fig.2,*5*). An article similar by form and function, made of nephrite, is known from the Bolgarskoe site of ancient city (Poluboyarinova, 1991, p.89-90, fig.9,*2*).

Type IV (1 article). Complex (fig.34,*21*), it is made as two plates with the convex-concave sides and round endings, with relief vegetative ornament in the middle, the moving rings are passed through them. One plate with three loops two on the ends and one in middle, the mobile rings are passed in them. The second plate is attached through a ring to the middle loop. The bronze brackets of a similar design are known from the vicinities of Bilyarsk village[17], from the pool of the Vyatka[18] and from the collection gathered from the territory of Kazan province[19]; most likely this type could be dated as the XIIIth - XIVth century.

Unit 2. Repousse.

Group 1. Silver.

Section A.

Type I (1 article). Under-oval (fig.32,*7*) with the imprinted image of flame-breathing dragon (?); filled with paste inside. Linked with the help of prongs and nails. The plate is fixed on the backside.

Unit 4. Groove on bone and stone.

Group 4. Bone.

Section B.

Type I (1 article). Under-rectangular (fig.34,*22*), sides are made as braces, in the bottom part there is a loop. In the corners of the plate there are iron nails; in the centre there is a cross-like ornament. The given bracket was found together with the bronze bracket (fig.34,*10*). It is dated as the 30-s of the XIVth century. The brackets of a similar form with circular ornament are characteristic for Kamensky stage (the XIIIth – XIVth centuries) of Askizskaya culture (Kyzlasov, 1978, p.126, fig.1,*42*; Kyzlasov, 1983, p.50, fig.26,*132*). Similar open-work osseous brackets with the dragon image are known from Bilyarskoe III settlement of the Golden Horde epoch (Gazimzyanov, Galimova, Gubaydullin, Valiullina, Drozdova,

7 NMRT N 7719-16, old N 10352.

8 Reported by S.I.Chetverikov.

9 GE, exposition.

10 NMRT N 5374-2, N 7719-23 and without inventory NN.

11 NMRT N 7719-13, AA20-25.

12 NMRT N 7719-13, N 7719-19.

13 Reported by S.I.Chetverikov.

14 NMRT N 5363-33, AA20-26, N 5653, AA20-30; N 7719-13, old N 10357.

15 NMRT N 5653, AA3.

16 Hmelevskoe I settlement- report of S.I.Chetverikov. In two barrows from the Bahtiyarovka III group such brackets were found attached to the leather bags (Kriger V.A. Otchet o raskopkakh v 1985, fig.28, 81,*4*); they probably served for fixing the belt to the bag. One article from the barrow 95 from Bahtiyarovka III is dated by a Janibek dirhem (Saray-al-Jadid, year?).

17 NMRT N 5427-21, 3 items.

18 KOMK N 68/43 and without inventory N.

19 Archaeological museum of Kazan State University N AKU-2/225.

Nabiullin, Starostin, Khuzin, Kazakov, p.199, fig.*27*; Kramarovsky, 2001, p.57; Nedashkovsky, 1999-2) and from Smolensk (Astashova, p.73-74, fig.5,*1*).

Group 5. Stone.

Section A.

Type I (1 article). Under-rectangular (?) slate, fragmentary preserved (fig.34,*23*); with round end. It is possible that the article could serve as a girdle clasp. At the centre the carved image of grass-feeding animal head (roe ?) with the leaves around it. In the end face of the plate there is a longitudinal cut, on a face sheet - apertures for lining. The realistic images of grass-feeding animals with the head turned to the back with the leaves around, similar to ours, are known on silver pendants, brackets, plates, tip of the belt from the north-west Tyan'-Shan' of the XIIIth century (Vinnik, p.85-86, fig.8-10; Kramarovsky, 1994, p.194, 196, fig.14, 16, 18, 22, 25; Kramarovsky, 2001, p.47, fig.20,*3,5-9*; *Pamyatniki kul'tury i iskusstva Kirgizii*, p.73-74; Khodzevich, p.90) and from the Far East of the XIIth – XIIIth centuries (Kon'kova, p.24, fig.19,*12*; Kramarovsky, 2001, p.51; Khodzevich, p.86-87, fig.1,*3*), on the Golden Horde ladle from the hoard found on Irtysh (Kramarovsky, 2001, p.69, fig.27,*3*), on the gold Iranian belt ornament of the second half of the XIIIth century (Kramarovsky, 1994, p.193-198, fig.1), on Anatolian bronze gilded cheeck-pieces of the second half of XIIIth - XIVth centuries (Kramarovsky, 2001, p.26, fig.8), on a matrix from Konstantinople (Kramarovsky, 2001, p.46-47, 50, fig.22), on a gold tip of the belt from the barrow close to site Gashun-Usta, dated as the 2nd half of the XIIIth - beginning of the XIVth century (Kramarovsky, 1973, p.69; Kramarovsky, 1994, p.195, fig.8,*11*; Kramarovsky, 2001, p.48, fig.21,*5*; Spitsyn, 1906-1, tab.VII,*10*; Nomads of Eurasia, p.84) and on the two silver sward-belt girdle clasps of the 2nd half of the XIIIth - XIVth century from Atkarsky burial ground (Monakhov, 1981, p.143; Monakhov, 1991, p.186, fig.6,*9*). The article, similar by shape, of marble-like onyx with vegetative ornament was found on the Selitrennoe site of ancient city (Poluboyarinova, 1991, p.90, 92, fig.9,*15*).

Stripes. Linked through apertures.

Unit 1. Cast.

Group 2. Bronze.

Type I (6 articles). Round half-spherical (fig.34,*29-32*).

Variant a (2 articles). With apertures (fig.34,*29*).

Variant b (2 articles). With wire, soldered to the back part (fig.34,*30*).

Variant c (2 articles). Without traces of linking (fig.34,*31-32*).

Stripes of variant *a* were found in 1913 in a mausoleum (grave 5), dated between the beginning and the middle of the XIVth century (Krotkov, 1915, p.125). As a whole the articles of this type were widely spread. In particular they are known in nomadic antiquities of Eastern Europe of the XIIIth - XIVth centuries (Fyodorov-Davydov, 1966-2, p.48, fig.8,*4*, AI).

Type II (2 articles). Openwork (fig.34,*24,27*). The first is similar by the form to a bronze bracket 2BIII and to a nephrite plate from the Selitrennoe site of ancient city (Poluboyarinova, 1991, p.89-90, fig.9,*1*).

Group 3. Iron.

Type I (1 article). With three petals (fig.34,*25*). The bracket of a similar form is known from Derbent (Kudryavtsev, p.241, fig.72,*10*).

Unit 3. Cut out from a sheet of metal.

Group 2. Bronze.

Type I (1 article). Openwork (fig.34,*28*).

Unit 4. Cut out from bone and stone.

Group 4. Bone.

Type I (1 article). Under-pentagonal (fig.34,*26*), with festoon edges, in the centre of scallops there are apertures.

The following category of belt set considered is *belt rings*. All of them are whole-cast, only one (fig.33,*10*) is bent from a cast cane. Concerning the material the belt rings are divided into two groups: silver and bronze. By the form of the article the following types are allocated.

Group 1. Silver.

Type I (2 articles). Round (fig.32,*2,5*), in section roundish.

Group 2. Bronze.

Type I (3 articles). Roundish (fig.33,*6-8*). One (fig.33,*6*) was found in the burial together with girdle clasp 3AI.

Variant a. Without ornaments (fig.33,*6-7*).

Variant b. With ornament as a network (fig.33,*8*).

Similar belt rings with ornament as a network were probably widely spread on all territory of the Golden Horde (*Proizvodstvo arkheologicheskikh raskopok i razvedok. V Kubanskoy oblasti*, p.4; Savel'eva, 1987, p.135, fig.35,*34*). The smooth rings of non-ferrous metals without ornaments are characteristic for steppe nomads of the Xth - XIVth centuries (Dvornichenko, Malinovskaya, Fyodorov-Davydov, p.180, fig.89,*3*; Dvornichenko, Fyodorov-Davydov, p.53, fig.33; Kyzlasov, 1980, p.90, fig.8,*4*; Lyakhov, 1992, p.173, fig.1,*A*; Mamontov, Sitnikov, 1994, p.157, fig.4,*6*; Shvetsov, p.265, fig.1,*10*); they are represented in the materials of north-west Rus of the Xth – XIVth centuries (Boguslavsky, p.102, fig.1,*1,4*; Sedova, 1981, p.152), Staraya Ryazan (Darkevich, Borisevich, p.398, tab.121,*A2-3*), Samarkand of the XIIIth century (Buryakov, Kramarovsky, p.261, fig.2,*1*), Volga

Bulgaria[20] and pool of the Vychegda of the XIIth – XIVth centuries (Savel'eva, 1971, p.215, tab.37,*19*).

Type II (2 articles). Oval (fig.33,*10-11*).

Type III (1 article). Under hexagon (fig.33,*9*) with two decorative flutes, in section roundish. A similar article (without the indication of the place of find) is kept in Kazan Museum[21].

Tips of belts. According to the material they are divided into three groups: silver, bronze, and iron. According to the technique of manufacturing two types are allocated: cast and cut out from a sheet. Two sections of tips according to the functional attribute are allocated: A - with function of a girdle clasp, B - for giving rigidity to the end of a belt. All tips were linked with the help of prongs or nails, only one (fig.33,*17*) - through apertures. The types are allocated according to the form of articles.

Unit 1. Cast.

Group 1. Silver.

Section A.

Type I (2 articles). Under-trapezium (fig.32,*2,5*); along the long sides a figured cut passes, flat, with chased vegetative ornament (floral-deciduous motive).

Type II (1 article). Semi-oval (fig.32,*2*) with the end as a brace, flat, with stroked vegetative ornament (flower motive).

Group 2. Bronze.

Section A.

Type I (1 article). Under-rhombi (fig.33,*12*), with the T-figurative end.

Type II (1 article). In the form of a trident (fig.33,*13*), with the T-figurative end.

By function and form these types are close to T-figurative iron belts tips, characteristic for Kamensky stage (the XIIIth - XIVth centuries) of Askizskaya culture (Kyzlasov, 1978, p.126, 131, fig.1,*11*, 5,*4*; Kyzlasov, 1980, p.81, 85, fig.1,*3*, 6,*7*) which penetrated into the Volga region[22].

Section B.

Type I (2 articles). Under-rectangular (fig.33,*14-15*), narrow.

Variant a. With a sharp end (fig.33,*15*).

Variant b. With ornament as intersected lines and cross strokes (fig.33,*14*). Concerning its ornament, this tip is close to Novgorod bracelets of the XIIIth - XIVth centuries (Sedova, 1981, p.103, 106, 110, fig.39,*16-17*).

Group 3. Iron.

Section B.

Type I (1 article). Rectangular (fig.33,*16*), one end is sharp, the other one - with two cuts; it has a longitudinal flute. The iron belt tips were widely spread on the territory of the Volga Bulgaria and Upper Kama region (Kazakov, 1991, p.140). They were found also in the Low Volga region (Fyodorov-Davydov, 1984, fig.97,*11*). The closest analogies for the given belt tip are known from Vodyanskoe (Fyodorov-Davydov, 1984, fig.104,*1*) and Bolgarskoe (Polyakova, 1996, p.203, 219, fig.66,*38*) sites of ancient cities. At the last one the same (concerning the form) bronze article was found in the Golden Horde layer.

Unit 2. Cut out from a sheet of metal.

Group 2. Bronze.

Section B.

Type I (1 article). Semi-oval (fig.33,*17*), cogs are cut out on the end; with puncheon ornament of lines. The article, similar by the form, but osseous, was found in nomadic burial in Saratov region (Maksimov, 1959, p.93, fig.2,*2*).

Thus, practically all elements of belt sets from the Uvek site of ancient city can be dated as the Golden Horde time (the 2nd half of the XIIIth - XIVth century). For some types of articles the narrower chronological intervals of existence are established. The features characteristic only for the Golden Horde articles are allocated also: bevels on the edges, superimposed figure, stamping technique (on the silver belt set) etc. At the same time it is necessary to note the absence in the given examples of the brackets specific to pre-Mongolian time. The characteristic features of them are the large height simulating solidity, small thickness, though the articles, as a rule, are whole-cast, original stylised vegetative or zoomorphological ornamentation, late heraldic forms.

It is probable that at least a part of the described above finds was made in the Golden Horde Ukek. This assumption it is possible to support with a find on the site of ancient city of the bronze casting mould (or matrix for its manufacturing), which served for manufacturing belt girdle clasps and has parallels in European art (Kramarovsky, 1985, p.158-159, tab.III,*12*; Fyodorov-Davydov, 1994, p.196).

The majority of the described articles are characteristic for the culture of settled monuments of the Golden Horde, but the significant group of details of belt sets (silver girdle clasp (fig.32,*1*), brackets 2AIII, 2AV, 2BIII, 4BI, 5AI, stripes 1,2I, belt rings 1,I, 2, I, tips of belts 2AI, 2AII, 2,2BI) finds parallels in nomadic materials, mainly of the east of Central Asia and south of Western Siberia. Probably, they should be considered as the elements of material culture that appeared

[20] Archaeological museum of Kazan State University N AKU-2/151.

[21] NMRT N 7827.

[22] Vizenmiller III, barrow 5 (Garustovich, Rakushin, Yaminov, tabl.XIV, *17*); the settlement near village Podgornoe in Saratov region – the information was given by S.I.Chetverikov.

in the cities of the Volga region with Mongols in the XIIIth and, maybe, in the XIVth century.

Concerning the silver belt set from burial N 4 of the mausoleum opened in 1913 (fig.32), it is necessary to note its affinity to other expensive belt sets of the Golden Horde period (Buryakov, Kramarovsky, p.260-261, fig.1-2; Levasheva, 1953, p.192, fig.9,20-24; Nikol'skaya, 1921, p.147-153; Spitsyn, 1906-1, p.261, fig.68-70, tab. VII,11; Kramarovsky, 1991, p.262).

The elements of the ornaments of the silver belt set also find many analogies and prototypes in materials of the Golden Horde epoch (Agapov, Kadyrbaev, p.209, fig.6-7, p.211, fig.5-8; Bulatov, 1969-2, fig.1,*9*; Buryakov, Kramarovsky, p.262-263, fig.3; Kramarovsky, 1973, p.67, tab.I-II; Kramarovsky, 1982, p.69-70, tab.II,*1-4,7-9,21-26*; Kramarovsky, 1985, p.158, 169, tab.III, XI,*6-8*; Kramarovsky, 1991, fig.16; Kramarovsky, 1994, p.194-195, fig.2,*4-5,12*; Kramarovsky, 2001, p.48, 64-65, 69, 85, 87, 89-90, 113, 121-122, 178, 181-182, 216, 219, 239, 327-328, fig.21,*1-7,9,11*, 25-26, 27,*5,8*, 32, 36, 38, 41, 58,*1-4,6*, 64-65, 93, 96-97, 113, 116; Mal'm, 1977; Mamontov, Sitnikov, 1995, p.102, fig.6,*9*; Noskova, 1984, p.233-235, fig.8; Panova, 1986, p.224-225, fig.2; Polyakova, 1996, p.168, 203, fig.60,*1*, 66,*42*; Skorobogatova, p.96, 98-99, fig.2,*6*, 4,*2,5*, 5,*1*; *Sokrovishcha Priob'ya*, p.203-207, fig.77; Spitsyn, 1906-2, fig.8,*19-33,60-61*; Fyodorov-Davydov, 1976, fig.74, 78, 83, 104-105, 108; Fyodorov-Davydov, 1994, fig.3,*3*, 4,*1*, 5,*1*, 8,*1,3*, 13,*3*, 15,*2*, 16,*1-2*, 23,*1*, 24,*3*, 34,*10*, 37,*4*, 44,*11*; Fyodorov-Davydov, 2001, p.14, tab.7,*4*; Shlyakhova, p.78, 80, fig.2,*6*, 3; Yakubovsky, 1931, p.37-38, 40, fig.15, 22; Fedorov-Davydov, 1984, fig.20-21, 26, 28, 35-36, 38, 40, 42, 45-50, 53-54, 56, 81; Fyodorov-Davydov, 1984, fig.9,*1*, 10,*1*, 12,*4-5*, 14,*2*, 17,*1*, 19,*1*, 23,*4*, 24,*1*, 25,*2*, 27, 30,*1,2,4*, 33,*2*, 39,*1*, 62,*1*, 69,*2*, 71,*2*, 72,*1,3*, 73, 79-80, 84,*1,4*, 100,*18*). Time of distribution of some details of ornaments go beyond the limits of the Golden Horde period: the images of lotus (?) and 'cross flower' are known at nomads of Central Asia since the I millennium BC until the ethnographic modernity (Agapov, Kadyrbaev, p.208-210, fig.2,*4-5*, p.229, fig.4-6, 10, p.231, fig.5, p.233, fig.12; Marsadolov, p.25-26, fig.II,*2,5,10-16,20-23*), and the motives of an opening flower similar to the Uvek ones are found on silver vessels of the XIth - XIIth centuries, on ceramics of the same time, on jewellery articles of Old Rus and in miniatures of the Greek manuscripts of the XIIth – XIIIth centuries, and also in the early Middle Ages art (Darkevich, 1975-2, p.36-37, 82-83, 114-115, 216-220, fig.40-43, 107-111, 176-177, 348-353; Makarova, 1986, p.15, 40, 57, 83, fig.5,*3,7,19*, 15, N 48, 21, N 206, 39,*3*; *Sokrovishcha Priob'ya*, p.82-84, fig.33).

By character of the ornamentation motives and form of separate details it is easy to guess the Eastern (probably, Far Eastern) style of articles of the complex of articles containing in grave, as the most probable date of burial is the 20-s – 30-s of the XIVth century. Most likely, the given belt with silver ornaments was made not later then the beginning of the XIVth century.

The metal and quality of furnish of the set allow us to speak about the high social status of its owner. It is possible to assume that the owner of the given belt was a high-ranking military man or civil official, if not an offspring of Khans' family. The north-east orientation of the buried person alongside with other attributes (including the material of the neighbouring burials in the mausoleum), allows to say that the burial place belongs to the representative of the Central Asia aristocracy, which obviously had moved to the Volga region together with other persons, buried in the mausoleum, not later than the end of the XIIIth - the beginning of the XIVth century. In this connection it is important to examine the question, how could a mausoleum with the north-east, i.e. non-Muslim orientation continue its functioning up to the 50-s of the XIVth century – the time when Islam in Ulus Jochi had become already the sole religion of ruling social layers.

Many bronze articles from Uvek site of ancient city are kept in the funds of the SOMK and the National Museum of Tatarstan Republic. Among them - *ornaments for head* (temple rings, earrings and kolt), for *hands* (fingerings and bracelets) and *clothes clasps* (syul'gams). The majority of the described below articles occur from the casual finds, though there are things found during archaeological works. In the latter case it is stated.

Temple rings. They are signet ring-like, made of round wire. According to the form the following types of articles are allocated.

Type 1 (2 items). As a usual ring, with non-clamped (fig.35,*1*) and slightly crossing (fig.35,*2*) ends. This type was widely spread both chronologically and territorially, in particular, in Russian lands (Darkevich, Borisevich, p.388, 399-400, 402, 408, 413, tab.111,*A1,4,6-8,G5*, 122,G*1*, 123,B*2*, 125,*1-2*, 131,*A1,G1*, 136,*A3-4,B3*; Sedova, 1981, p.13) and Volga Bulgaria (Kazakov, 1978, p.64, fig.33,*5*; Kazakov, 1991, p.114; Kazakov, Rudenko, Begovatov, p.57, fig.8,*1-3*; Polyakova, 1996, p.168, 171, fig.60,*11,17*, 61,*1*) in the Xth - XIVth centuries.

Type 2 (1 item). With a scroll on one end (fig.35,*3*). These articles were also widely spread; the rings with the ends bent outward. The rings close to ours by size were known in Novgorod from the second half of the XIth till the beginning of the XVth century (Sedova, 1981, p.13) and in Staraya Ryazan (Darkevich, Borisevich, p.388, 396, 398, 400, 408, tab.111,*2-3*, 119,*3*, 121,*B2,6*, 123,*B2*, 131,*A1*). They were found in materials of the Bolgarskoe site of ancient city (Polyakova, 1996, p.168, 171-172, fig.60,*18*), East Kama region of the XIIIth – XIVth centuries (Kazakov, 1978, p.64, fig.33,*4*), Mordvin of the XIIIth – XIVth centuries (Vasil'eva, 1993, p.64, 72, fig.4,*18-19*; Monakhov, 1991, p.175, fig.5,*23*) and Yul'yal'sky of the XIVth - beginning of the XVth century (Nikitin, 1992, p.164, fig.3,*5*) burial grounds.

Type 3. Kept in the funds of Hermitage a fragment of silver three-bead temple ring not less than 3 cm in diameter with one preserved acorn-like bead decorated with filigree belt (fig.35,*4*). The end of the handle, having a twining from a thin silver wire, is unchained and curtailed in a spiral. Similar temple rings are most typical for pre-Mongol monuments of Middle Volga region, but the three-bead temple rings were spread in the Golden Horde period as well (Polyakova, 1996, p.168-171, fig.60,*9*).

Earrings. All items were made of round in section wire. Four articles (fig.35,*7-10*) occur from the complex of the structure dated by coins of the 20-s - 30-s of the XIVth century[23]. One more (fig.35,*11*) was found at the city region, dated by coins of the 20-s - the first half of the 60-s of the XIVth century.

Type 1 (5 items). Earrings in the form of an interrogative mark (fig.35,*5-11*)[24]. Three of them probably had beads on the ends fixed by a bend in the bottom part (fig.35,*8*) or by a winding of thin wire (fig.35,*5-7*); for another one (fig.35,*6*) a bronze bead with fourteen facets was preserved. This type of earrings is widely spread practically on the whole territory of Ulus Jochi in the second half of the XIIIth - XIVth century; it was allocated by G.A.Fyodorov-Davydov as a typically Golden Horde kind of ornaments (Fyodorov-Davydov, 1966-2, p.116). A number of peoples kept them down to late Middle Ages (Fyodorov-Davydov, 1994, p.193). Not mentioning all details of numerous analogies, we shall just specify that gold earrings of the same form were found in the burials of Mongolian aristocracy of the end of the XIIIth – first half of the XIVth century in Uvek (Ballod, 1919, tab.3,*1*; Ballod, 1923-1, p.76-77, tab.19; Krotkov, 1915, p.119, 123, photo 6, 17; GASO, fund 407, inventory 2, file 980, p.8).

Type 2 (2 items). It represents a variety of the first type distinguished by the bottom end of an article, bent in a three petal rosette (fig.35,*10-11*). On one item there is a three-facet in section bead of birch bark and the rests of birch bark pendant (fig.35,*11*). A similar earring was found on Loemsky burial ground of the XIIth – XIVth centuries (Savel'eva, 1972, tab.10,*3*).

Kolt (1 item). Poorly preserved, it can be related to the category of six-point star-like (fig.35,*12*) ones. The cast article has three hemisphere ledges on the face side (false graining?). It is linked through a wire handle, of which only a small fragment remained. According to the Novgorod materials the six-point stars like kolts are dated as the end of the XIIth - beginning of the XIVth century (Sedova, 1981, p.20); they were also found in the Tver hoard of pre-Mongolian epoch (*Tverskoy klad 1906 g.*, tab.I,*1-2,10,12*).

Fingerings. The division into types was made concerning the presence of the dashboard and insets and under the form of the article.

Section A. Dashboard.

Type 1 (1 item). It is made of a thin bronze sheet 2 mm wide. The ends of it, cut lengthways, were plaited as a dashboard (fig.35,*13*). The inset of such a ring, as well as other similar articles from Uvek taken from collections of SOMK[26] and NMRT[27], probably, was made of a glass. Similar rings were found in Bulgar[28] and on the Selitrennoe site of ancient city (Fyodorov-Davydov, 1994, p.192, fig.42,*1*; Fyodorov-Davydov, 1984, fig.101,*2-3*)[29]; glass insets were widely spread in many Golden Horde cities (Busyatskaya, 1976, p.49-50).

Type 2 (1 item). Cast with round dashboard, on which there is a solar mark (fig.35,*14*). In the free space between the swastika and the dashboard edge the rests of greenish enamel were preserved. Such rings are known in the Vym' burial grounds of the XIIIth - XIVth centuries (Savel'eva, 1987, p.126, 129-130, fig.34,*19*), on the Loemsky burial ground (Savel'eva, 1972, tab.14,*10*, 16,*7*) and in materials from the Volga Bulgaria (Kazakov, 1978, p.37, fig.12,*1*; Poluboyarinova, 1993, p.29, 80, fig.6,*6-7*, 32,*1*; Polyakova, 1996, p.173, 179, fig.61,*30*; Rudenko, 1995, p.14, 22; Rudenko, 1998-2, p.24, fig.1,*20*)[30] and Saratov region (settlement near from the village Shumeyka). Ten articles of this type with traces of enamel were found in Novgorod in jeweller's workshop of the 80-s – 90-s of the XIVth century (Sedova, 1981, p.135); similar rings are known in Old Russian and Finno-Ugric monuments of the XIIIth – XIVth centuries (*Drevnosti kamskoy chudi*, p.45, tab.XV,*11*; Sedova, 1981, p.135; Spitsyn, 1896, p.47, tab.XIII,*31*).

Type 3 (1 item). Oval-dashboard cast ring made of silver (fig.35,*15*). On its dashboard there are unclear rests of an image. Concerning Novgorod materials such type of rings is dated as the end of the XIIth – the middle of the XVth century (Sedova, 1981, p.135); it is present in materials from the Bolgarskoe site of ancient city of the Golden Horde period, including the 30-s – 60-s of the XIVth century (Polyakova, 1996, p.173, fig.61,*13,27-29*), Murzikhinskoe settlement of the XIth – the 60-s of the XIVth century (Kazakov, Rudenko, Begovatov, p.56, fig.8,*13*) and a settlement of the XIIth – the XIIIth centuries in site Dar'yalyk-Kul' (Nerazik, p.107, fig.60,*5*).

Type 4 (2 items). Massive copper articles with rectangular dashboard and lateral ledges; one of them (fig.35,*16*) was found during F.V.Ballod excavations in 1919, another is kept in Hermitage (fig.35,*17*). Stone casting mould serving for manufacturing of ornaments of such kind is originated from the Uvek site of ancient city (fig.62,*4*). The rings, similar by the form, are known in materials of Khorezm of the XIIth - XIIIth centuries (Nerazik, p.107, fig.60,*1*), the Shehr-Islam site of the XIVth century (Atagarryev, 1965, p.16, tab.IV,*1-2*) and from the Boldyrevskoe burial ground of the second half of the XIVth century located near Uvek (Zakharikov, Kasankin, Chetverikov, Otchet, p.20, fig.175,*9*); similar articles occurred from the Bolgarskoe site of ancient city (Polyakova, 1996, p.173, 179, fig.61,*16,22,24-25*)[31], 2 similar gold rings from Volga Bulgaria are kept in Archaeological Museum of Kazan State University[32]. Similar

[23] The possibility to study this complex was given by D.G.Barinov, to whom the author expressed his gratitude.

[24] One such earring from Uvek site of ancient city kept in GE: N ZO-143.

[26] NN AO 1257; NVSP 18079; 18084; 28700; SMK 52025, A-2311.

[27] N 5365-58.

[28] NMRT N 7719-46, AA-10.

[29] NMRT N 5754-30.

[30] NMRT N 3863; Kazan Kremlin, 1997, trench XIV, works of A.G.Mukhamadiev.

articles were spread in north-west Iran in the XIIth – XIIIth centuries and in Turkey at the end of the XIVth – the middle of the XVth century (Wenzel, p.72-73, 94-95, 221, 231, fig.216, 274). Mother-of-pearl ring of a similar form was found on the Selitrennoe site of ancient city (Poluboyarinova, 1991, p.71, fig.6,*13*; Fyodorov-Davydov, Bulatov, p.220, fig.31,*20*), according to the numismatic material from the trench (Fyodorov-Davydov, Bulatov, p.189-191), it should be dated as the 30-s – 80-s of the XIVth century. Similar relief ledges on both sides of the dashboard were also found on some other rings from the Golden Horde cities (Boyko, p.6, fig.1,*6*; Poluboyarinova, 1991, p.71, fig.6,*4,6,8,19*; Fedorov-Davydov, 1984, p.90, fig.69), and also on articles of the XIIth - XIIIth centuries from Shehr-Islam (Atagarryev, 1965, p.16, tab.IV,*3*) and on rings from the late Middle Ages layers of Otrar (Akishev, Baypakov, Erzakovich, 1981, fig.101,*1,5*).

Type 5 (1 item). Ware with a rhombus-like dashboard and drop-like ornaments on it (fig.35,*18*).

Section B. Without the dashboards.

Type 1 (2 items). Laminar rings with fragments of Arabic (?) inscriptions. On one of them (fig.35,*19*), made of a bronze sheet, the inscription is carved; another ring, decorated also with a rosette ornament (fig.35,*20*), was cast in a firm, obviously stone, mould. The first article by technique of manufacturing has wide analogies since the XIth - XIIth centuries (Kazakov, 1991, p.125; Sedova, 1981, p.130), the second one is similar to bronze rings from the Bolgarskoe site of ancient city (Vysotsky, p.9, tab.IV,*2,5-6*; Polyakova, 1996, p.183-184, fig.63,*6*)[33] and Laishevskoe settlement (Rudenko, 1998-2, p.26, fig.1,*40*; Rudenko, Shaykhutdinov, fig.XXV,*20*).

Type 2 (2 items). Narrow open-ended laminar samples made from golden-colour bronze. One of them is linear (fig.35,*21*), the other one - with unchained ends (fig.35,*22*). The first article has the ornament with the cannelure as triangles, the second is decorated obviously in imitation of animal head bracelets of the 'Volga Bulgarian' type (see below), which allows to date it as the second half of the XIIIth - beginning of the XVth century.

Type 3 (1 item). Castled ribbed ware with the thicken medium part of bow (fig.35,*23*).

Bracelets. The division into types is made concerning the section and ornaments.

Section A. Wire.

Type 1 (1 item). Oval in section; without ornaments (fig.35,*24*). In Novgorod similar bracelets were spread in the Xth - first half of the XIIIth century (Sedova, 1981, p.103), but the similar article was found at the Selitrennoe site of ancient city in the layer of the XIVth century (Fyodorov-Davydov, Bulatov, p.220, fig.31,*29*; Fedorov-Davydov, 1984, p.90, fig.66).

Type 2 (1 item). Round wire, with the rests of a gold covering (fig.35,*25*). Round in section bracelets were widely spread on the territory of Old Rus, they are dated as the period from the end of the I millennium AD up to the XIVth century (Sedova, 1981, p.94). The copper gilt pins made of a wire with the diameter close to our article, were known in the XIIth - XIIIth centuries in the Far East (Kon'kova, p.81-82, fig.5, 20,*11-12*).

Section B. Braided.

Type 1 (1 item). Loosely braided from three two-fold round in section wires. On the ends of the article the wires are bent together (fig.35,*26*). Similar bracelets of silver and bronze were found in Novgorod in the layers of the second half of the XIth - beginning of the XVth century (Sedova, 1981, p.102), on the Bolgarskoe site of ancient city (*Arkheologicheskaya karta Tatarskoy ASSR. Zapadnoye Zakam'e*, p.93, fig.9,*15*; Polyakova, 1996, p.181, fig.62,*6*), IV Starokuybyshevskoe settlement of the XIIth - XIVth centuries (Kazakov, 1991, p.30, 34, 123, fig.42,*6,8*; Rudenko, 1998-2, p.26, fig.1,*36*), in a hoard near the village Mokrye Kurnali (Khlebnikova, 1963, p.307, fig.1,*2*), on Zolotarevskoe and Yulovskoe sites of the XIth - XIIIth centuries (Polesskikh, 1971, p.212, fig.6,*3*; Polesskikh, 1978, p.244-245, fig.3), on Bulgarian monuments in Samara Volga region (Vasil'ev, Matveeva, p.198, fig.1), and also in Otrar in the layers of the XIIIth – XVth centuries (Akishev, Baypakov, Erzakovich, 1987, p.199-200, fig.88,*6*) and in the Upper Kama region, where they are dated as the XIVth century (*Drevnosti kamskoy chudi*, p.44, tab.15,*14*). As a whole, it is possible to consider bracelets of 'loose' braiding as Volga Bulgarian dated as the XIIth - XIVth centuries. They should not be mixed with the articles of the Xth - XIIth centuries, which have ends stroked in dashboards, which were widespread on a wider territory.

Type 2 (1 item). A twisted bracelet with flattened ends from round in section wire is kept in Hermitage collection (fig.35,*27*). The similar wares are well known in the materials of medieval monuments of East Europe (Polyakova, 1996, p.181-182, 186, fig.62,*16*).

Section B. Laminar.

Type 1 (1 item). Stylised as animal head bracelet, ornamented with groups of direct and oblique cross lines (fig.35,*29*). Animal head bracelets of some other types were spread in the territory of Rus in the Xth – the end of the XIIIth centuries (Sedova, 1981, p.112), however concerning the ornamentation our item is close to Novgorod bracelets of the XIIIth - XIVth (Sedova, 1959, p.251, fig.9,*22-23*; Sedova, 1981, p.103, 106, 110, fig.39,*16-17*) and to the article from the Bolgarskoe site of ancient city[34], obviously dated as the Golden Horde time.

Type 2 (1 item). Animal head bracelet of 'Volga Bulgarian' type (fig.35,*28*). The image is rather realistic: even the wool of a

[31] NMRT N 7719-46; AA 14-3,4,8,14.

[32] AKU N 8-3.

[33] NMRT N 5363-22, AA 13-7; N 7719-13, AA 21-?; N 7719-47, AA 13-9.

predator is shown. Such bracelets chronologically can be referred to the second half of the XIIIth - beginning of the XVth century; they were spread basically in the Golden Horde monuments of the Volga region (Kramarovsky, 1978, p.46; Kramarovsky, 2001, p.186-194, fig.99-102; Rudenko, 1995, p.21; Rudenko, 1998-2, p.20, 26, fig.1,*39*; Sedova, 1981, p.119; *Nomads of Eurasia*, p.17; Kriger V.A. Otchet o raskopkakh Bakhtiyarovskogo, fig.171, 178,*4*), though they were also presented from Dnieper up to the Central Asia (Polyakova, 1996, p.185).

Type 3 (1 item). A bracelet with circular ornament, with slightly narrowed ends (fig.35,*30*). Stub ended laminar bracelets according to Novgorod materials are dated as the end of the Xth – XIVth century (Sedova, 1981, p.103, 110), and the same bracelets with circular ornament as the XIIth - XIIIth centuries (Sedova, 1981, p.103, 107, 110, fig.40,*3,5*).

Type 4 (3 items). Bracelets of 9-18 mm width decorated with the ornaments of 4 to 7 projecting longitudinal strips (fig.35,*31-33*). By available analogies (Baypakov, Nastich, p.25-26, fig.5,*1-2*, 6; Makarov, 1995, p.174, 185, fig.1,*17*; *OAK za 1896 g.*, p.11; Polyakova, 1996, p.181, 183, 185, fig.62,*8*, 63,*4*; Rudenko, 1999, p.64, fig.3,*13*; Sedova, 1981, p.108, fig.41,*7-8*)[35] these types are possible to date as the XIIIth – XVth centuries.

Thus all head and hands decorations from the Uvek site of ancient city have analogies in materials from other monuments of the Golden Horde period, though temple rings, kolt, some rings (section A, type 3, section B, type 1) and bracelets (section A, types 1-2, section B, types 1-2, section C, types 1, 3) can be dated as pre-Mongolian period. It is possible to consider the last ones as made in the Golden Horde time using pre-Mongolian prototypes or still using old ornaments.

As a whole all described articles are characteristic of cities of Eastern Europe of the XIIIth - XIVth (for some of them narrower dates are established).

Syul'gamas. During researches of the end of the XIXth - beginning of the XXth century at the Uvek site some items of bronze clothes clasps - syul'gamas - were gathered. Seven articles are kept in SOMK, one in GE, three syul'gamas (?) are known from archival materials.

By the form three basic types are allocated.

Type I (1 item). A small fragment of a handle of blade syul'gama (fig.36,*1*); a diameter of the bow is about 12 mm. As no other blades of the article remained, it is possible only to assume (basing on the small diameter of the handle), that it is a part of an article with long narrow blades. Narrow bladed syul'gamas were widely spread on Mordvin lands in the XIIIth - XIVth centuries (Aksenova, Zeleneev, Shakirov, p.152, tab.IX,*2*; Alikhova, 1954, p.266, fig.22-23, 25; Alikhova, 1958, p.70, fig.1,*46-47,56-58*; Vasil'eva, 1993, p.71-73, fig.3,*9*, 4,*5-12,17*, 5,*23-31*; Gol'msten, p.12, fig.6-7; Zeleneev, p.152-153, fig.1,*5,7*, 2,*3,5,7*; Lyakhov, 1997, p.81-82, 86, 90-91, fig.2,*10*, 3,*8*, 5,*5*, 6,*11-12*, 7,*13*; Monakhov, 1991, p.175, fig.5,*13,15*; Peterburgsky, Pervushkin, p.25a, tab.VI,*5*; Polivanov, p.18-19)[36], and the researchers are inclined to consider such clasps as ornaments inherent mainly to mordva-moksha (Alikhova, 1958, p.75-77; Vasil'eva, 1993, p.64). Besides the ancient territory of Mordvin tribes, the narrow bladed articles of similar shape and proportions were found in materials of settlement Damba I (Rudenko, 1998-2, p.19, 28, fig.5,*56-57*), Bolgarskoe (Polyakova, 1996, p.196, 200, fig.65,*21-23*; Rudenko, 1998-2, p.19, 28, fig.5,*65-72*; Khlebnikova, 1987, p.58, fig.6,*16*)[37], Bilyarskoe (Khuzin, 1995, p.210, fig.42,*7*), Selitrennoe (Fyodorov-Davydov, 1994, p.192, fig.42,*5,8*) and Tsarevskoe (Fyodorov-Davydov, Vayner, Guseva, p.119, tab.V,*6*) sites of ancient cities, and on the last one a syul'gama was found during the excavation of a mansion of the end of the 50-s - beginning of the 60-s of the XIVth century (Fyodorov-Davydov, Vayner, Guseva, p.104-105). The articles belonging to the given type were found also in nomadic materials of the Golden Horde period (Garustovich, Yaminov, Rakushin, tab.XXV,*27*; Mamontov, Sitnikov, 1994, p.157, fig.4,*2*; Fyodorov-Davydov, 1966-2, p.38, fig.6,*3I*).

Type 2 (6 items). Horseshoe-like (ring shaped), roundish in section, helix ended fibulas without ornaments (fig.36,*2-6,8*); the arches of the well preserved five articles have a diameter of 23 to 42 mm, and the wire used for their manufacturing - from 1,5 to 4 mm. On the article from the collection of Hermitage (fig.36,*8*) on each of the helical ends 3 platens are allocated. Horseshoe fibulas with helical ends were produced for a long time: since the first centuries AD up to the XIXth century. However the date of the Uvek syul'gamas can be determined as the 2nd half of the XIIIth - XIVth centuries (i.e. the time of functioning of the site of ancient city itself). On the monuments of the epoch of advanced Middle Ages the numerous analogies to such articles are known. Concerning the Novgorod materials the clasps of the considered type are dated as the Xth – the middle of the XIIIth century (Sedova, 1981, p.86). As a whole this type is widely represented on the monuments of the eastern Slavonic circle of the Xth - XIIIth centuries, in the antiquities of Baltic countries and Scandinavia of the IXth - XIIth centuries (Mal'm, 1967, p.174-176), in materials of Mordva (Aksenova, Zeleneev, Shakirov, p.164, tab.VIII,*8*; Alikhova, 1954, p.172, fig.17,*4*; Alikhova, 1958, p.70, fig.1,*44-45,63-64*; Vasil'eva, 1993, p.71, fig.3,*7-8*; *Gaginsky mogil'nik*, p.149-150, fig.226; Gol'msten, fig.2; Lyakhov, 1997, p.81-82, 86, 90-92, fig.2,*11*, 3,*7*, 5,*6*, 6,*13-15*, 7,*3-4,10*, 8,*10*; Monakhov, 1991, p.175, fig.5,*1,4,11*; Peterburgsky, Pervushkin, p.25a, tab.VI,*6*; Archives of IIMK, fund 1, 1913, file 45, p.69-70, fig.5) and other Finno-Ugric nations of the XIIth - XIVth centuries (Ivanova, p.60, 63; Mal'm, 1967, p.174). Syul'gamas, similar to ours, were found at Volga Bulgaria monuments of the Xth - XIVth centuries (Kazakov, Rudenko, Begovatov, p.60, fig.9,*32-33*; Polyakova, 1996, p.196, 199-200, fig.65,*20*; Rudenko, 1998-2, p.18-19, 28, fig.5,*43-44,60*)[38], at the Selitrennoe site of ancient city

[34] BGIAZ N 177-465.

[35] BGIAZ N 60-56; NMRT N 5363-22.

[36] The British Museum NN M&LA 1922,6,68,77-79,81-2,84,89-94.

[37] NMRT N 5363-22, AA21-1; N 7719-12, AA21, old N 12890; N 7719-13, AA21-1, old N 20652; N 7719-16, AA21-1, old N 10288; N AA21-1, old N 12890 - 2 items.

(Fyodorov-Davydov, 1994, p.192, fig.42,*2*) and in nomadic burials of the Volga region of the Golden Horde period (Lyakhov, 1992, p.163, fig.4A, 6A; Mamontov, 1992, p.18, 36, fig.2,*5*, 9,*17*; Fyodorov-Davydov, 1966-2, p.42).

Type 3 (1 item). A fragment of a horseshoe-like fibula with the overwound arch and an end as a small (9 mm) tube (fig.36,*7*); the diameter of the whole article was probably 55 mm. Bronze twisted articles with helical ends are known in materials of Old Rus, Baltic countries and Scandinavia of the end of the Xth - XIIIth centuries (Darkevich, Borisevich, p.229, 260, tab.1,*12*, 32,*1*; Mal'm, 1967, p.180), in Mordvin monuments of the Golden Horde time (Alikhova, 1954, p.272, fig.17,*3*; Alikhova, 1958, p.76; *Gaginsky mogil'nik*, p.149-150; Monakhov, 1991, p.175, fig.5,*8*), from the Volga Bulgaria of the XIIth – XIVth centuries (Rudenko, 1998-2, p.18-19, 28, fig.5,*45,61-63*)[39] and from Sergo-Polivanovsky burial ground of the XIth - XIIth centuries (Khalikov A.Kh. Otchet, p.12-14, tab.III,*2-4*). However, the example of syul'gama, closest by form to the Uvek one is from Novgorod. It is dated as the middle of the XIIIth century (Sedova, 1981, p.86-87, fig.31,*4*).

Making preliminary results, it is possible to conclude that the considered small collection of bronze clasps-syul'gamas enables to speak about the Finno-Ugric (mainly Mordvin) component in the ethnic structure of the population of the Golden Horde city Ukek. The presence of this component is explained, probably, by affinity of the Uvek site of ancient city to Mordvin lands, and also, probably, by administrative subordination of a part of Mordvin tribes on the right bank of the Volga to the social top of Ukek in the 2nd half of the XIIIth - XIVth centuries.

§ 2.2. Bronze mirrors

Judging by museum collections and archival materials, during the period from the 70-s of the XIXth to the 20-s of the XXth century more than 80 items of mirrors were found on the Uvek site of ancient city. In the given paragraph only 63 well-preserved items of examined articles are considered. All of them, except one (type E1; fig.40,*10*), occur from the casual finds.

A part of mirrors is kept in the funds of SOMK. The basis of it is the collection from museum of SUAK. Another part appeared in the collection of Kazan Society of Archaeology, History and Ethnography in the XIXth century, whence together with other articles was transferred to NMRT in 1929. Other 5 articles are kept in GIM and 6 in GE[40]. In 1913 in 'Transactions of SUAK' the article written by professor V.V. Chelintsev was published, where he analysed the chemical structure of bronze mirrors, including several found in Uvek (Chelintsev, p.153-166). In this paragraph the Uvek collection of mirrors is introduced, as far as it is possible, in a more integral way. This will allow us to make a rather complete representation of the given category of medieval Uvek antiquities.

The mirrors were widely spread in Eurasian steppes even in the Scythian – Sarmatian epoch. In the Vth - VIIth centuries they were preserved in the Northern Caucasus and the Volga region, which, probably, was connected with post-Sarmatian - Alan tradition. In the VIIIth - Xth centuries bronze mirrors already were widely spread in the huge territory from Danube in the west up to Trans-Baykal region in the east and from the Volga Bulgaria in the north up to the Northern Caucasus in the south. In the XIth century they were preserved probably only in the Volga-Kama region and on the Caucasus, and at Polovtsians they appear, according to S.A.Pletneva, not earlier than the XIIth century (Pletneva, 1981, p.217).

The distribution of metal mirrors becomes rather wide in the Golden Horde period, i.e. in the second half of the XIIIth - XIVth centuries. Their collections from some monuments of that time include tens and even hundreds of items.

During the last decades there were some works on classification of the metal mirrors of the advanced Middle Ages, including those of the Golden Horde time (Lubo-Lesnichenko, 1975; Polyakova, 1977, 1996; Fyodorov-Davydov, 1966-2), where some basic classification attributes are determined. They are: the form of the rim, the image on the backside, the presence or absence of the central or lateral handle, the diameter and the metal (the type of an alloy).

We accept the following classification system: the sections are allocated under the form of the rim (by the principle of G.F.Polyakova), types - under the image on the mirror, which sometimes allows to allocate also the variants inside the type. In view of the absence of preserved handles on the overwhelming majority of articles from considered collections it is frequently possible to speak about their probable presence only presumably. The provisional diameter is specified individually for each item.

Section A. With narrow high rim (fig.37,*1-12*, 39,*1*)[41].

Type 1 (3 items). Mirrors with the image of two floating one after another fishes, with the diameter of about 7,3-7,4 cm. 2 variants are allocated: relief with thorough elaboration of separate details (fig.37,*2*) and blurred with a low relief (fig.37,*1*). Similar mirrors with the image of two fishes are widely enough represented in Low and Middle Volga region (Vasil'eva, 1979, p.235, fig.17,*3*; Vasil'eva, 1985, p.178, fig.4,*1*; Vysotsky, p.13, tab.IX,*7*; Garustovich, Rakushin, Yaminov, tab.V,*4*; Zhelezchikov, Kutukov, p.139, fig.4,*1,Z*; Kruglov, Klepikov, p.139, fig.1,*4*; Nedashkovsky, Rakushin, 1998-1, p.107, fig.3,*8*). Similar articles are known in the late nomadic antiquities of the East Europe of the 2nd half of the XIIIth - XIVth centuries (Fyodorov-Davydov, 1966-2, p.82, N1; Fyodorov-Davydov, 1976, p.163, fig.125; Shnaydshteyn, p.67, fig.4,*4*; Fyodorov-Davydov, 1984, fig.108,*4*), and in the barrow 108 (grave 2) of burial ground Bakhtiyarovka III mirrors

[38] NMRT N 5427-158, AA21-9 - 8 items; N 7719-16, AA37-32; N 7719-55, AA21-9.

[39] NMRT N 5427-158, AA21-9.

[40] GIM N 34162, inventory 952/35-38,40; GE N ZO-29, 35, 139-142, 7273,159,8-9, 7273,193.

[41] Figures 37, 39-40 executed by A.I.Rakushin.

of the given type (Kriger V.A. Otchet o raskopkakh v 1985 godu, fig.155-156)[42] were found with coins of Uzbek (Saray al-Makhrusa 722 A.H., Saray 731 A.H.), in materials of Hakassko-Minusinskaya trough (Lubo-Lesnichenko, 1975, p.72, N 141), Otrar of the XIIIth - XIVth centuries (Akishev, Baypakov, Erzakovich, 1987, p.195, fig.85,*4*; Baypakov, 1990, p.144, fig.4), Tsarevskoe and Selitrennoe sites, the Volga Bulgaria (Polyakova, 1996, p.232-233, fig.74,*6*; Rudenko, Shaykhutdinov, fig.XXIV,*10*; Fyodorov-Davydov, 1966-2, p.82; Tallgren, 1918, tab.IX,*12*)[43], and also the Middle Vyatka[44]. The finds of mirrors with the blurred image of fishes are known from Bolgar[45], vicinities of Bilyarsk[46], from Selitrennoe and Tsarevskoe sites of ancient cities[47].

Type 2 (5 items). With flower ornament as blossoming buds, 'growing' alternately from the edge and from the centre of the mirror. In the centre there is a rosette with six petals as rectilinear hexagon with concave sides (fig.37,*3*). The diameter of mirrors is about 7.7 cm. This type was spread in the Volga region during the Golden Horde period (Valeev, p.172-173, fig.74,*6*, 75,*6*; Vasil'eva, 1979, p.235, fig.17,*2*; Grekov, Kalinin, p.54, tab.XIV; Lyakhov, 1992, p.164, fig.7A; Lyakhov, Yakubovsky, p.179, fig.2,*1*; Chelintsev, p.161-162, fig.12)[48], lots of such mirrors were found on the Bolgarskoe site of ancient city (Akchurina, Efimova, Smirnov, Khovanskaya, p.78-79, fig.34; Vysotsky, p.13, tab.IX,*10*; Polyakova, 1996, p.230-231, fig.73,*1*)[49], one item occurs from vicinities of the village Bilyarsk (Tallgren, 1918, tab.IX,*5*)[50], from the Starokuybyshevskoe fort[51] and from settlement Damba I, dated by coins of the 40-s – 60-s of the XIVth century, in Alekseevsky area of Tatarstan (Rudenko, 1994, p.137, fig.7,*9*), the place of find of one more fragment from the Kazan Museum is not clear[52]. Besides the Volga region the finds of such mirrors are known in the Northern Caucasus (Uvarova, 1900, p.260, tab.CIX,*6*), in the Don region (*Katalog arkheologicheskikh kollektsy*, p.155, tab.30,*5*), in the barrows of the Southern Ural (Ivanov, Kriger, p.17, fig.4,*15*, FII; Kriger, Zhelezchikov, p.302, fig.2,*1*) and in the layers of Otrar of the XIIIth - XIVth centuries (Akishev, Baypakov, Erzakovich, 1987, p.195, fig.85,*2*; Baypakov, 1990, p.144, fig.2). In opinion of G.A.Fyodorov-Davydov, this type is the most numerous type of the Golden Horde mirrors (Fyodorov-Davydov, 1994, p.203).

Type 3 (7 items). Mirrors with the blurred images of a circle of four sitting human figures divided by four dragons. Among mirrors of this type it is possible to allocate 2 variants: the first one with the diameter of 7.7 cm (fig.37,*4*, 38), the second with the diameter of 8.1 cm with the convex platen dividing the mirror into the peripheral and central parts (fig.37,*5*). On some mirrors there are traces of soldered handles. Similar articles were widely spread on the monuments of the Golden Horde period from the Middle Vyatka up to the Northern Caucasus and from the Dneiper region up to the Western Kazakstan (Vysotsky, p.13, tab.IX,*3*; Kazakov, 1978, p.93-94, fig.47,*5*; Nedashkovsky, Rakushin, 1998-1, p.87, 107, fig.3,*3*; Polyakova, 1977, p.81; Polyakova, 1996, p.232-233, fig.74,*3*; Smirnov, 1951, fig.46; Uvarova, 1900, p.354; Fyodorov-Davydov, 1966-2, p.82, 116; Tallgren, 1918, tab.IX,*7,14*; Kriger V.A. Otchet o raskopkakh v 1985 godu, fig.59-60)[53], and they were found in two burials with coins of the middle of the XIVth - beginning of the XVth century (Sinitsyn, 1956-1, p.219, fig.9; Symonovich, p.108-110, fig.49,*2*).

Type 4 (2 items). Mirrors with the images of al-Boraks – a winged mythological creatures with the head of a human being and the body of a lion. Both articles essentially differ by size, composition and quality of work; therefore here it will be expedient to allocate 2 variants. The first variant is presented by a fragment of a mirror of steel-grey colour with the diameter of 10.9 cm (fig.39,*1*), on the edge of which there is 'bless wishing' in Arabic language: 'Glory and durability, bliss and shine, increase and praise, well-being and high rank, authority and success, power and benefaction to the owner of this for ages' (Katanov, 1909, p.3). In the central part of the field there are two distinct figures of al-Boraks. The second variant of this type – is a mirror with the diameter of 8.1 cm, of much worse quality (fig.37,*6*). The composition of this article consists of 4 striding one after another al-Boraks. The mirrors with al-Boraks of the first variant have wide analogies in the steppes of Eurasia and medieval cities of the Volga region (Agapov, Kadyrbaev, p.121, fig.9-10; Arzyutov, 1936-2, p.103; Valeev, p.110, fig.42,*1,3,5*; Vasil'eva, 1979, p.235, fig.17,*10*; Ismagilov, p.141-142, 147, fig.5,*5*; Krachkovskaya, p.357, fig.1; Likhachev, p.16, tab.IV,*14*; Mamontov, Sitnikov, 1994, p.162, 165, fig.8,*1*; Nedashkovsky, 1999-2; *OAK za 1895 g.*, p.60, fig.139; Polyakova, 1996, p.232-233, 238, fig.74,*7-8*; Savel'ev, 1852, p.72-76; Smirnov, 1951, p.116-117, fig.51; *Trudy*

42 VOKM N 24000/50.

43 See AMZ without inventory N; NMRT N 5363-46, AA7-11, inventory NN 6329-6330, 6334-6339 + 2 items without inventory NN; AA7-20, inventory N 6376; AA7-?, inventory N 6340; AA?, inventory N 6432; N 5427-167, inventory N 6374, 6463, AA7-28, old N 20024; GIM NN 28406-28412, 78607, inventory NN 872, 914; BGIAZ NN 12-63; 176-762; Balynguzskoe settlement, investigations of F.A.Akhmetgalin, 1994.

44 The village Babino near city Sovetsk, Kirov region; KOMK number 33363, 116.

45 NMRT N 5363-46, AA7-20, inventory N 6435.

46 NMRT N 5427-167, inventory N 6464, Bil.113.

47 NMRT N 5754-34; GE, exposition.

48 See AMZ without inventory N; VOKM N 2355/1, Tsarev-73, 15-1/2; GE, exposition; SOMK N SMK 62431.

49 NMRT N 5363-15, AA6-2, inventory N 6296; N 5363-46, AA6-13, inventory N 6299; AA7-4, inventory NN 6325, 6359-6360, 6364, 6373, 6381, 6446 + 1 item without inventory N; AA7-20, inventory NN 6378, 6386, 6391, 6409, 6414, 6448, 6460; AA7-?, inventory N 6408; N 7719-11, AA7-25, old N 20586; BGIAZ N 177-487 and exposition.

50 NMRT N 5427-167, AA12-3, inventory 6357.

51 BGIAZ N 127-43.

52 NMRT N 7798, AA7-25, without inventory N.

53 AKU N AKU-2/103-2; BGIAZ NN 9-143; 121-20 (Semenovskoe settlement, investigations of 1981); 161-217; 176-708; exposition; VOKM N 24000/26, Bakhtiyarovka; NMRT N 5363-15, AA6-6, inventory N 6293; N 5363-46, AA7-17 (1 item without inventory N); AA7-19, inventory NN 6291, 6295, 6297, 6326 and 26 items without inventory NN; N 5427-167, AA12-2, inventory N 6356; AA12-4 (2 items without inventory NN); AA12-5, old N 20024; N 5754-35; GIM N 54746; GE, exposition, Tsarevskoe site of ancient city; KOMK N 33363/70, village Ulus; SOMK N AO 1758, village Dzhangla, barrow 1, N SMK 52033/A-2319 (AO 294), Skatovka, south-eastern group, barrow 1, grave 1; EKM N NV 8684, settlement near village Podgornoe in the regions of Ukek; Vth Semenovskoe settlement, the materials of E.A. Begovatov, Laishevskoe settlement, the materials of K.A.Rudenko.

VIII Arkheologicheskogo s'ezda, tab.LXXXVI,*40*; Fyodorov-Davydov, 1976, p.165, fig.127; Khlebnikova, 1975, p.239, fig.3,*5*; Chelintsev, p.154-155, fig.2; Erdman, p.273)[54] , in the Don region (Krachkovskaya, p.357, fig.1), the Central Asia (Bernshtam, p.159, fig.69; Pugachenkova, 1961, p.153, fig.1; Turebekov, Bizhanov, p.600, 602), in Minusinsk trough (Lubo-Lesnichenko, 1975, p.105, fig.100, N 288), in the Northern Caucasus and in South-West Asia (Vinogradov, 1987, p.267-268, fig.1; Erdman, p.273; Ward, p.30, fig.18)[55]. Mirrors with four al-Boraks and also with circular Arabic inscription were spread in Iran in the XIIth - XIIIth centuries (Erdmann, 1967, fig.23A)[56].

Type 5 (4 items). Mirrors with two circles in the centre, in the field there is complex braiding, in which heads of various animals and a human head in a crown (fig.37,*7*) are included. The same image of the head in the crown is known on the Middle East mirrors dated as the XIIIth century (Melikian-Chirvani, p.229-230, fig.105-106; The Anatolian Civilisations, p.72)[57], a similar detail is present on a fragment of plaster from the Selitrennoe site of ancient city (Fedorov-Davydov, 1984, p.63, fig.31; Fyodorov-Davydov, 1984, fig.81,*3*). The internal surface of the high rim of the article at the figure is decorated with a belt of convex 'pearls', diameter of the mirror is 8 cm. This type was widely spread in the steppes of East Europe from the Volga-Kama region up to the Caucasus (Vinogradov, 1987, p.268, fig.2; *OAK za 1901 g.*, p.82, fig.161; *Trudy VIII Arkheologicheskogo s'ezda*, tab.LXXXVI,*39*; Uvarova, 1900, p.95, tab.XLVIII,*2*)[58]. To the list of these mirrors made by M.G.Kramarovsky (Vinogradov, 1987, p.268), it is necessary to add that they are well presented in materials from the Bolgarskoe site of ancient city - 30 items (Valeev, p.103, fig.39,*1*; Likhachev, tab.IV,*11*; Polyakova, 1996, p.230-231, fig.73,*4*)[59], 2 items are kept in the collection of Volgograd Museum[60], one article is kept in SOMK[61] and one – in EKM[62] , one item is found in Kalmykiya (Sinitsyn I.V. Otchet ob arkheologicheskikh raskopkakh, fig.134)[63], and one more occurs from the vicinities of Bilyarsk (Tallgren, 1918, tab.IX,*8*). According to M.G.Kramarovsky, the type is dated as the 2nd half of the XIIIth - beginning of the XIVth century (Vinogradov, 1987, p.268); however at the burial ground Bakhtiyarovka II (barrow 46, burial 1) mirror of the given type (Kriger V.A. Otchet o raskopkakh Bakhtiyarovskogo, fig.6, 8) was found together with Birdibek dirhem of Gulistan 759 A.H. (1357-58), that makes us think that termination of manufacturing and use of such articles occurs at the period not earlier than the beginning of the second half of the XIVth century.

Type 6 (1 item). The mirror with a convex circle at the centre, the other field is filled with cellular ornament; diameter of the disc is 8.8 cm (fig.37,*8*). The close analogies to this type were found in the Volga Bulgaria (Valeev, p.103, fig.39,*3*; Polyakova, 1996, p.227-228, fig.71,*9*), in the Low Volga region[64] , in Kalmykia[65] and in Central Asia (Baypakov, 1990, p.144, fig.1).

Type 7 (2 items). The mirror is divided by a protruding thin rim into an external and internal field, the centre is allotted with one more thin rim. On the internal field there are images of 4 moving one after another animals. Probably, here it is possible to allocate 2 variants: 1 - mirror with the diameter of 9.5 cm with the image of dogs and hares (fig.37,*9*), 2 - article with lions figures (?) with the diameter of 10.8 cm (fig.37,*11*). The external fields of both mirrors are occupied with a hardly distinguished composition consisting of bound shoots of plants and animals' bodies shown in a fast run. Besides, the external rim of the bigger mirror (the variant with lions) is discerned with the belt of convex 'pearls'. The rather close analogies to this type are found in the Volga Bulgaria (Valeev, p.172, fig.74,*4*; Polyakova, 1996, p.230-231, fig.73,*7*; Smirnov, 1951, fig.49), the Low Volga region (Fyodorov-Davydov, 1966-2, p.82-83, fig.14,*3*; Fedorov-Davydov, 1984, p.93, fig.86; Fyodorov-Davydov, 1984, fig.108,*2*)[66], Kalmykiya (Sinitsyn I.V. Otchet ob arkheologicheskikh rabotakh, fig.365)[67] and north-east Kazakstan (Arslanova, fig.1,*155a*). The mirrors with a similar picture are widely spread in Minusinsk trough (Lubo-Lesnichenko, 1975, p.49-53, fig.20-21, NN 47-60).

Type 8 (5 items). Mirrors with the diameter of about 9.5 cm with a concentric relief circle at the centre; the external ring of the field is shared into parts by 4 hemisphere ledges, the space between them is occupied by S-like ornament (fig.37,*10*, 38). This type is characteristic for the Golden Horde monuments of the Volga region, the Northern Caucasus, and also for the antiquities of the Eastern Europe nomads of the XIIIth - XIVth centuries (Valeev, p.172-173, fig.74,*2*, 75,*3*; Grekov, Kalinin, p.54, tab.XIV; Katanov, Aynalov, p.3, 8, fig.2; Kramarovsky, 1975-2; Likhachev, tab.IV,*7*; Mamontov, Sitnikov, 1994, p.149, 154, fig.1,*5*; *OAK za 1896 g.*, p.83, fig.341; Polyakova, 1996, p.229-230, fig.72,*9*; Sinitsyn, 1960, p.136, fig.23; Smirnov, 1951, p.117, fig.50; Trifil'ev, p.133, fig.11;

54 NMRT N 5363-46 inventory N 6413; AA8, inventory N 6352, AA7-14 - 3 items; N 5754-34; VOKM N 14925, Bykovo-77, 17-1/5; Laishevsky uezd, reported by K.A.Rudenko.

55 The British Museum NN 1904.12-2.2; 66.12-29.76-77; 89.4-25.218.

56 The British Museum N 1963.7-18.1.

57 The British Museum N OA + 1344.

58 Selitrennoe site of ancient city, PAE-77: AKM N AMZ-33154/A-12140/131; AKU-2/103-1.

59 NMRT N 5363-46; AA6-5, inventory N 6313; AA7-9, inventory NN 6365, 6367, 6387, 6392, 6442 + 3 items without inventory NN; AA-?, inventory NN 6327, 6405; BGIAZ, exposition, NN 143-68, 238-183 (The last article was found in 1990 at the trench CVII, dated by the coins of the last third of the XIIIth - beginning of the 60-s of the XIVth century – reported by the author of excavations, V.S.Baranov).

60 VOKM N 11993, Leninsk-66, 33-1/4, N 25237/1, Bakhtiyarovka II-83, 46-1/2.

61 Without place and number.

62 Without inventory number, excavations of P.D.Rau, from the exposition (Garustovich, Rakushin, Yaminov, tab.XXI,*2*; Nedashkovsky, Rakushin, 1998-1, p.87-88, 107, fig.3,*10*).

63 Arkharinsky burial ground, barrow 14, grave 1.

64 VOKM N 27401/9, Bakhtiyarovka-67, 11-1/2.

65 SOMK N AO 1171, Belaya Gora (station N 8), barrow 82 (Nedashkovsky, Rakushin, 1998-1, p.88, 108, fig.4,*1*).

66 VOKM N 10889, Spartakovka-75, ocasional find; GE, exposition, Tsarevskoe site.

67 Vostochnyy Nalych, 2nd group, barrow 6, grave 1.

Uvarova, 1900, tab.XLVIII,*1*; Fyodorov-Davydov, 1966-2, p.83, type O1; Fyodorov-Davydov, 1976, p.166; Fyodorov-Davydov, 1994, fig.46,*2*; Chelintsev, p.162-163, fig.13)[68]. A similar article was revealed in Otrar in the layer of the XIIIth – XIVth centuries (Akishev, Baypakov, Erzakovich, 1987, p.74, fig.29,*5*).

Type 9 (4 items). The mirrors with the diameter of about 14 cm have 3 ornamental belts: 2 internal ones are decorated with a vegetative ornament, the external one is represented by the image of animals running one after another ('must of animals') among spiral vegetative shoots. The composition 'must of animals' consists of 3 animal pairs: a wolf pursues a fox, a lion – a deer, a dog – a hare (fig.37,*12*, 38). The articles of this type had rather wide territory of spreading: from the Volga-Kama region (Valeev, p.173, fig.75,*5*; Katanov, Aynalov, p.7; Smirnov, 1951, p.116, fig.47)[69] in the north, Kharkov and Ekaterinoslavskaya province (Katanov, Aynalov, p.3-4, fig.4-5; Trifil'ev, p.133, fig.9) in the west up to the Caucasus (Muzhukhoev, fig.22,*1*; Uvarova, 1894, p.126, fig.102; Uvarova, 1900, p.269, tab.CIX,*17*) and Otrar (Akishev, Baypakov, Erzakovich, 1987, p.195, fig.85,*3*; Baypakov, 1990, p.141, fig.3) in the south. A similar article is known from Iran[70]. The mirrors with the image of 'animals' must' were also found in the Volga region on the Bolgarskoe (Vysotsky, p.13, tab.IX,*1-2,5*; Polyakova, 1996, p.230, 232-233, fig.74,*1*)[71] and Mechetnoe (Khabarova, p.219)[72] sites of ancient cities, V Semenovskoe (Kazakov, 1988, p.80, fig.4,*22*)[73] , Laishevskoe of the XIIth – XIVth centuries (Rudenko, Shaykhutdinov, fig.XXIV,*6*) and III Kominternovskoe of the end of the XIIIth – the first half of the XIVth century[74] settlements, on Bayryaki-Tamaksky burial ground (Kazakov, 1978, p.94, fig.47,*6*), on Malinovskoe site[75], near from the former village Komarovka[76] and in environs of village Bilyarsk (Nedashkovsky, 1999-2)[77] in Tatarstan, near the village Kurnaevka in Volgograd region (Khabarova, p.218-219, fig.2,*3*)[78]. By analogies the type is possible to date as the 2nd half of the XIIIth - XIVth century. The motive of serpentine shoot, available in the internal ornamental belt of the articles, has a lot of parallels in the art of the Far East - from the I millennium AD (Guseva, 1978, p.91, fig.5-8), of Asia and Europe – during the II millennium AD[79].

Type 10 (1 item). The ware of 8.5 cm in diameter from Hermitage collection (fig.6, central in a top row; N ZO-142) has two ornamental belts. The narrow internal belt is decorated with vegetative ornament of a twisting shoot, and the wide outer one contains a circular Arabic inscription in handwriting naskh: 'Glory, which (is) maximum happiness for the powerful chiefs, (be) you good deal of the future life' (translation by N.F.Katanov). The similar mirrors are well known in materials from the Bolgarskoe and Tsarevskoe sites of ancient cities, and also nomadic barrows of the Golden Horde time, in particular from the territory of Northern Caucasus (Katanov, 1898; Polyakova, 1996, p.230-231, 238-239, fig.73,*5*; Fyodorov-Davydov, 1966-2, p.79, 83, fig.13,*CI*).

Section B. Mirrors with a wide massive rim (fig.39,*2-10*, 40,*1-3*).

Type 1 (3 items). Mirrors with the image of floating fishes. In this type it is possible to allocate 3 variants.

The first variant. Fragment of the mirror with the diameter of 8.4 cm (fig.39,*4*) with the image completely similar to the type A1; differs from it only by the form of the rim. The similar mirrors are well known by finds in the Volga-Kama region (Valeev, p.110, fig.42,*6*; Likhachev, p.16, tab.IV,*10*)[80], in the area of the Low Hopyor (*Trudy VIII Arkheologicheskogo s'ezda*, tab.LXXXVI,*41*), in Minusinsk trough and in the Far East (Lubo-Lesnichenko, 1975, p.71-72, fig.56, NN 138-140; Shavkunov, 1960, p.235, fig.6,*1*; Shavkunov, 1981, p.94, fig.6; Shavkunov, 1990, p.278, tab.61,*6*; Rupert, Todd, tab.XXI, N 211).

The second variant. The mirror with the diameter of 9 cm with the image of 2 fishes, probably, of sturgeon breed (fig.39,*2*). The characteristic damage at the centre of the mirror allows assuming the existence of a convex holder, later beaten away with a blow. Similar articles are known in nomadic burials of the Golden Horde period in the north east of Kazakstan (Arslanova, fig.135) and in Otrar in the layer of the XIIIth - XIVth centuries (Baypakov, 1990, p.144, fig.4).

The third variant. The fragment of a large mirror with the diameter of 11.4 cm. The composition of the mirror consists of 3 ornamental belts (fig.39,*5*). The centre of the mirror is marked with a convex thin rim, then there is a belt with the profile image of four (?) fishes. The following belt is a strip of arc ornaments, limited by the rim with cross 'dents'. The last external belt, which is situated actually on an internal part of

68 BGIAZ N 24-142; 179-18 (Malinovskoe site, Spassky region of Tatarstan); VOKM N 21047, Bykovo III-76, 3/1; NMRT N 5363-15, AA6-1, inventory N 6294; N 5363-46, AA7-1, inventory N 6300; AA7-2, inventory NN 6320, 6348, 6371, 6374 + 3 items without inventory NN; AA7-20, inventory N 6420; N 5754-34; N 7719-11, AA7-31, old N 21890; N 5427-167; AA12-1, inventory NN 6358, 6465 and 1 item without inventory N; GIM NN 28406-28412, 54746, inventory 914.
One fragment of the same mirror was found in Viatka basin: KOMK N 33363/115.

69 AKU-2/103-3.

70 The British Museum N 66.12-29.75.

71 NMRT N 5363-15, inventory N 6397; 5363-46, AA7-7, inventory N 6403; AA7-11, inventory N 6349; AA7-12 (2 items without inventory NN); AA7-16 (1 item); AA7-20, inventory N 6389; AA7-55, old N 12008; AA8-12, without inventory N; inventory N 6323; GIM NN 28406-28412, inventory 914; BGIAZ NN 17-330; 177-470; 242-54 (the last article was found in 1990 at the trench CX, dated by the coins of the 30-s – 80-s of the XIVth century – information was given by author of excavations, R.F.Sharifullin); 689-513/259 (ware was found in 1996 at trench CXXII, dated by coins of 1280-1351 - information was given by author of excavations, V.S.Baranov).

72 VOKM N 2404/21.

73 Investigations of E.A.Begovatov.

74 Investigations of E.P.Kazakov, 1988.

75 BGIAZ N 179-19; Spassky region of Tatarstan.

76 BGIAZ N 678-1/49(M). Spassky region, occasional find of 1996.

77 NMRT N 5427-167, AA7-39, Bil.28.

78 VOKM N 8080/2.

79 See Nedashkovsky, Rakushin, 1998-1, p.92-93.

80 NMRT N 5363-?, AA7-?, inventory N 6341.

the smoothly decreasing rim, consists of lines bent as 'hooks'.

As we can suppose, the mirrors with the image of fishes had plenty of variants of composition construction, therefore it will be expedient to mention some other types close to the examined articles: Atkarsky burial ground (Garustovich, Rakushin, Yaminov, tab.VI,*6*; Nedashkovsky, Rakushin, 1998-1, p.93, 107, fig.3,*6*)[81], mouth of the river Cheremshan (Nedashkovsky, Rakushin, 1998-1, p.93, 107, fig.3,*2*)[82] and village Elaur close to Sengiley (Nevostruev, p.559), the Bolgarskoe (Polyakova, 1996, p.228-229, fig.72,*5*)[83] and the Bilyarskoe (Valeev, p.107, fig.41,*4-5*) sites of ancient cities, Toretskoe settlement (Nedashkovsky, 1999-2), stanitsa Nizhnekurmoyarskaya, Rostov region (*Katalog arkheologicheskikh kollektsy*, p.155, tab.30,*4*), Khorezm - materials of the XIVth century (Kdyrniyazov, 1983, p.108), the south of East Siberia, China, Korea and Vietnam (Lubo-Lesnichenko, 1969, p.72, fig.2; Lubo-Lesnichenko, 1975, p.72-73, fig.57, NN 142, 144; Shavkunov, 1960, p.235, fig.6,*2*; Shavkunov, 1981, p.94, 98, fig.4-5; Shavkunov, 1990, p.279-280, tab.62,*2*, 63,*1*; Shavkunov, Kon'kova, Khorev, p.81, fig.2; Rupert, Todd, tab.XIX, N 212), the one without a place of find and inventory number from the funds of SOMK (Nedashkovsky, Rakushin, 1998-1, p.89, 108, fig. 4,*5*).

Type 2 (1 item). A fragment of a mirror with the diameter of 10.2 cm. At the centre there is a convex rim; the edge of a flat rim is outlined with a belt as 'ladder' (fig.39,*3*). The safety of the article allows to see the image of an animal figure (monkey?) and various lines filling the whole field. Probably, in the initial variant of the mirror these lines comprised letters or hieroglyphs of an inscription. The analogies to the given article are unknown, except a far similar mirror from Bakhtiyarovka burial ground[84].

Type 3 (3 items). Fragments of mirrors with the diameter of about 12 cm. The remained parts of the articles (fig.39,*6*) allow to restore rather precisely the image on them by available analogies. The ornament consists of blossoming buds, growing alternately from the edge and from the centre of the mirror. The centre is occupied by a hexagon with concave sides, the periphery – by spiral bent shoots. The given type of mirrors was widely spread in the Volga region (Valeev, p.106, fig.40,*1*; Valeev, Valeeva-Suleymanova, fig.30,*5*; Garustovich, Rakushin, Yaminov, tab.V,*12*; Likhachev, tab.IV,*13*; Nedashkovsky, Rakushin, 1998-1, p.89, 107, fig.3,*11*; Polyakova, 1996, p.234-235, 239, fig.75,*7*; Fyodorov-Davydov, 1984, fig.107,*1*; Tallgren, 1918, tab.IX,*3*; GASO, fund 407, inventory 2, file 883, p.87; GASO, fund 407, inventory 2, file 975, p.43)[85]; on the Selitrennoe site of ancient city even the casting mould for manufacturing mirrors of this type (Fyodorov-Davydov, 1984, fig.107,*2*) was found. Similar articles occur from Kalmykiya (Sinitsyn I.V. Otchet ob arkheologicheskikh raskopkakh, fig.244) and Iran or Turkey (Melikian-Chirvani, p.230, fig.107).

Type 4 (1 item). The fragment of the mirror with the diameter of 7.5 cm, of grey-steel colour with copper oxides (fig.39,*7*). The image is slightly erased, but it is possible to distinguish contours of characteristic Chinese hieroglyphs. In Volgograd museum of regional ethnography 2 whole items of similar mirrors (Kriger V.A. Otchet o raskopkakh Bakhtiyarovskogo, fig.64, 77,*3*; Kriger V.A. Otchet o raskopkakh v 1985 godu, fig.31)[86] are kept, and in the Archaeological Museum of Kazan University there is one more fragment of an article of this type[87].

Type 5 (1 item). A mirror with the image of boys, flowers and shoots of chrysanthemum (?), the diameter is 15.5 cm (fig.39,*8*). At the centre of the disk there is a 16-petal flower, in the middle of which there is a holder in the form of a truncated cone. The mirrors similar to this type, with the image of boys and flowers are known from Minusinsk trough and from China (Lubo-Lesnichenko, 1975, p.73, fig.58, N 145)[88]. Besides, the 16-petal flower (a lotus), represented on the given mirror, has close analogies on other mirrors from Minusinsk trough (Lubo-Lesnichenko, 1975, p.54, 64-65, 89-90, fig.24, 48, 83).

Type 6 (4 items). The image on mirrors consists of 2 symmetrically located dragons, with heads turned to the centre of the disk, which is marked with a protruding thin rim. Between the snake-like bent bodies of the dragons there is a smoking tripod. In this type it is possible to allocate 2 variants: an 8-petal festoon mirror with the diameter of about 13 cm (fig.39,*9*) and a round type, where an 8-petal rosette makes the internal edge of a flat rim; the diameter is 13.8 cm (fig.39,*10*). The analogies for these both round and festoon mirrors are well known in the Volga region from the mouth of Kama in the north up to the Tsarevskoe site of ancient city and Kalmykiya in the south in the materials of the XIIIth - XIVth centuries (Akchurina, Efimova, Smirnov, Khovanskaya, p.79, fig.35; *OAK za 1896 g.*, p.136, fig.478; *OAK za 1902 g.*, p.140, fig.254; Polyakova, 1978, p.217-219; Polyakova, 1996, p.234-235, 239, fig.75,*5*; Rudenko, Shaykhutdinov, fig.XXIV,*5*; Smirnov, 1951, p.117; Smirnov, Merpert, p.48-49; Fedorov-Davydov, 1984, p.93, fig.88; Fyodorov-Davydov, 1966-2, p.80, fig.14,*4*; Grekov, Iakoubovski, tab.II)[89].

Type 7 (1 item). A fragment of the mirror with the diameter of 15.6 cm, decorated with a rich vegetative ornament (fig.40,*1*). The centre of the mirror is allocated with a protruding rim, on the edge of the ornamental field there is an

81 Barrow 13, 1909: SOMK N NVSP 30391.

82 1925: Khvalynsk museum of regional ethnography N 357.

83 BGIAZ NN 177-145; 177-445.

84 VOKM N 25237/10, Bakhtiyarovka II-83, 49-1/6.

85 VOKM N 10892; NMRT N 5363-46, AA7-6, inventory NN 6321,6344, 6363, 6375; SOMK N SMK 54261.

86 VOKM N 25237/12, Bakhtiyarovka II-83, 50-1/8; N 24000/8, Bakhtiyarovka III-85, 85-1/3. The second mirror (Kriger V.A. Otchet o raskopkakh v 1985, fig.31) was dated by the coins of Khizr (Gulistan, 761 A.H.) and Murid (Gulistan, 762 A.H.).

87 AKU-2/103-4.

88 The British Museum N OA 1985.5-7.1.

89 GIM N 36213; NMRT N 5363-7; N 5363-46, AA7-10, AA7-23; N 7719-11, AA7-35, old N 21890; GE N ZO-26; SOMK N AO 1619; Laishevskoe settlement, investigations of K.A.Rudenko.

inscription in Arabic language, the text of which was restored by analogies (Translation of N.F.Katanov): 'Solid glory with serene life, all-round happiness with a saving victory, growing success with helping fate and favourable situation with long drawn existence, (or 'blessed conditions for the future life') [will be] for ages!' (Katanov, Aynalov, p.2). The given type has analogies in the Volga region (Valeev, p.172-173, fig.74,*5*, 75,*1*; Khabarova, p.216-217, fig.1,*2*; Erdman, p.275-276)[90] and in Kharkov region (Katanov, Aynalov, p.1-3, fig.1).

Type 8 (1 item). The article is decorated with the relief image of two dragons, one of which is flying in the clouds, and the other one is flying above the waves (fig.40,*2*). At the centre there is a hemisphere loop handle; the diameter of the article is 12.2 cm. There are analogies from the Bolgarskoe site of ancient city, from Minusinsk trough and from China (Lubo-Lesnichenko, 1975, fig.78, N 203; Rupert, Todd, tab.XXVIII, N 344).

Type 9 (1 item). The given mirror was found together with the article of the previous type at the Uvek site of ancient city in 1994 in the territory of the area, dated according to the numismatic data as the period from the 20-s up to the middle of the 60-s of the XIVth century; pieces of charred wood were stuck to both mirrors. The article is decorated with eight cylinder-like brows (fig.40,*3*); its diameter is 9.8 cm. The mirror has a hemisphere handle - loop at the centre. The close mirrors are known from the Karakorum (Evtyukhova, 1965, p.283, fig.145,*1*), China, Korea and Minusinsk trough (Lubo-Lesnichenko, 1975, p.114-116, fig.103; Rupert, Todd, tab. III, VI-VII, NN 2, 4, 25, 27, 55; Swallow, N 8); the more remote parallels are available in materials of the Bolgarskoe site of ancient city[91], Minusinsk trough and China (Lubo-Lesnichenko, 1975, p.81-82, fig.75; Rupert, Todd, tab. III, IX, NN 1, 3, 75; Swallow, NN 55, 560).

Section C. Mirrors with a wide triangular-like in section rim (fig.40,*5-6*)[92].

Type 1 (1 item). The mirror has an ornament as a dent at the external edge (fig.40,*5*). The central part of the article, with the diameter of about 9 cm, is decorated the same way as the field of the mirror of type A8 - by hemisphere ledges and S-like figures. Similar mirrors were found in the Volga Bulgaria (Valeev, p.103, 172, fig.39,*2*, 74,*3*; Likhachev, tab.IV,*3*; Polyakova, 1996, p.228-229, fig.72,*4*) and in materials of Otrar of the Golden Horde period (Akishev, Baypakov, Erzakovich, 1987, p.74, fig.29,*1*). The article of similar external shape, but with the image of dogs instead of S-like figures was found in one of Golden Horde barrows of the burial ground of Alebastrovo-II in the Ural region (Ivanov, Kriger, p.17, 35, fig.4,*15, OII*, 11,*7*; Kriger, Zhelezchikov, p.303, fig.3,*3*). Ornamentation of the edge of the mirror with the belt of slanting lines was known in the XIIIth - XIVth centuries in the Middle Volga region (Rudenko, 1994, p.133, fig.3,*2*)[93], in trans-Baykal region (Tal'ko-Gryntsevich, tab.XII,*3c*) and in the north-east of Kazakstan (Arslanova, fig.135).

Type 2 (1 item). A mirror with ornament as several small circles; with the diameter of about 8.7 cm (fig.40,*6*). It was published earlier (Valeev, p.111, fig.43,*9*; Grekov, Kalinin, p.54, tab.XIII). A small fragment of a similar mirror was found on Laishevskoe settlement (Rudenko, Shaykhutdinov, fig.XXIV,*8*). 'Circular' ornament of another kind is presented on bronze mirrors of the beginning of the common era (Kozhomberdiev, p.40, fig.6,*4*; Lubo-Lesnichenko, 1975, p.41-42, fig.10-11).

Section D. Mirrors with low bolster-like rim (fig.36,*14*, 40,*4,7-11*).

Type 1 (1 item). A fragment of an article decorated with two concentric circles. In two internal fields there are unclear images, in the outside one – an arch ornament; the diameter of the mirror is about 7.2 cm (fig.40,*8*). Concerning the arch ornament and the composition the fragment is close to mirrors from Minusinsk trough dated as the Xth - XIVth centuries (Lubo-Lesnichenko, 1975, p.80, fig.73, NN 171-172), from the Golden Horde layer of the Bolgarskoe site of ancient city (Polyakova, 1996, p.225-226, fig.70,*9*), and also to the article of the XIIIth - XIVth centuries from the pool of the Ural river (Ivanov, p.90, fig.11,*2*).

Type 2 (1 item). A fragment with the diameter of about 8 cm, with an arch and striped ornament filling the two external belts of the article, which are formed by concentric circles (fig.40,*10*). Exact analogies of the given type are not known, however, a very similar arch ornament is present on late nomadic mirrors from Eastern European steppes (Mamontov, 1993, p.159-160, fig.5,*3*; Fyodorov-Davydov, 1966-2, p.79, fig.13,*A1*), and also on mirrors from Bulgar (Polyakova, 1996, p.224-227, fig.70,*1*, 71,*2*)[94] and Khorezm (Kdyrniyazov, 1981, p.128, fig.3,*4*), and on medieval pottery of Baykal region (Aseev, p.102, tab.XXXIV); similar articles were found on Zmeysky catacomb burial ground of the XIth - XIIth centuries (Stratanovich, p.60, fig.4) and on the Bolgarskoe site of ancient city[95]. The arch ornament of some other forms was also spread in the Golden Horde period at the nomads of the Saratov Volga region and the Southern Ural (Ivanov, Kriger, p.17, 35, fig.4,*15*, DII, 11,*19*; Kriger, p.186, fig.10,*4*; Lyakhov, 1992, fig.9A)[96], and also at Samarskaya Luka (Vasil'eva, 1993, p.74, fig.6,*9*) and at the population of Middle Vyatka[97]. Concerning the ornament of the external belt, the mirror is similar to Saltovo-Mayatsky ones of the VIIIth - Xth centuries (Pletneva, 1967, p.142-143, fig.37,*1-4*; Polyakova, 1996, p.216, 237, fig.69,*17*), though similar ornamentation is kept down to the Golden Horde period, in which materials it is also present (Agapov, Kadyrbaev, p.121, fig.12; Arslanova, fig.150; Ivanov, Kriger, p.17, fig.4,*15*, VII; Tal'ko-Gryntsevich, tab.XII,*3v*)[98].

[90] VOKM N 10890, Spartakovka-75; N 10892; Archives of SOMK, fund 85, inventory 1, file 158, p.5.

[91] NMRT N 7719, AA4-42.

[92] This section is marked as an independent only presumably. Perhaps it should be included into the section D.

[93] BGIAZ N 177-486.

[94] NMRT N 5363-46, AA8-8, AA8-15.

[95] NMRT N 5363-46, AA8-4.

[96] SOMK N SMK 60012.

[97] KOMK N 33363/69.

Type 3 (1 item). The fragment of the mirror with the diameter of 6.6 cm, the edge of the article is ornamented with the belt of 2 raised border-like lines, between which there is a number of dot ledges (fig.40,*11*). From the Bolgarskoe site of ancient city two fragments of similar articles occurred. One of them has a small lateral handle (Polyakova, 1996, p.224-226, 237, fig.70,*4*)[99], a similar article was found near the town Atkarsk of Saratov region (Minkh, 1911, p.2). Besides, the mirror with close ornamentation is kept in the Volgograd Museum of regional ethnography[100].

Type 4 (1 item). A fragment of a mirror is decorated with arches of circles, butt with each other; the diameter is about 7.6 cm (fig.40,*4*).

Type 5 (1 item). An article with the diameter of about 7.2 cm with an ornament as 2 concentric circles and an unclear image between them (fig.40,*7*). Similar mirror was found in New Saray during excavation of the buildings which functioned in the 40-s - 90-s of the XIVth century (Fyodorov-Davydov, 1964-2, p.269, fig.16,*3*). Similar articles are well known in the barrows of the Low Volga region. One of the barrows is dated by a coin of the XIVth century (Arzyutov, 1933, p.110).

Type 6 (1 item). The mirror with the diameter of 6.4 cm, decorated with geometrical ornament as 6-petal rosette consisting of rhombuses extended to the centre of the article (fig.40,*9*). Similar ornamentation with rhombuses was also found in the mirrors from site Krasnyy Yar (Fyodorov-Davydov, 1966-3, p.246, fig.9,*3*) and from Bulgar (Polyakova, 1996, p.226-229, fig.71,*3*, 72,*1*).

Type 7 (1 item). The mirror of rough cast with the diameter of about 11 cm from Hermitage collection (fig.36,*14*). It has the central handle – loop. The mirror is ornamented by a concentric circle with a diameter twice smaller than the diameter of the article. The concentric circle is connected with the rim by convex lines, forming a wide belt as 'stairs'. It is possible that the mirror was made in pre-Mongolian time.

Section E. Mirrors without expressed rim (fig.40,*12*).

Type 1 (3 items). Articles with the diameter of about 15.4 cm; the return surface is ornamented by two intersected raised borders making a cross. At the centre of the disk a convex arch loop (fig.40,*12*) is situated. One mirror was found in 1913 in a rich female burial, interpreted by the researchers as Mongolian and dated as the beginning of the XIVth century (Krotkov, 1915, p.119, 127-130, fig.3). Similar articles with cross-like ornament were widely spread in Polovtsian steppes in the XIIth - XIVth centuries, however most widely spread - only in the Golden Horde period (Alikhova, 1954, p.275, fig.17,*11*; Boyko, p.6, fig.1,*5*; Vasil'eva, 1985, p.227, fig.15,*27*; Garustovich, Rakushin, Yaminov, tab.XVIII,*4*; Dobrolyubsky, p.112, tab.VI,*14,18*; Il'yukov, Kazakova, p.123, fig.26,*11-12*; Kasankin, 1994, p.99, fig.1,*3*; *Katalog arkheologicheskikh kollektsy*, p.155, tab.30,*10*; Kosikov, Grib, p.261, fig.4,*23*; Kuznetsov, 1963-1, p.87-88, fig.26,*7*; Kuznetsov, 1963-2, p.42, tab.IV,*5*; Larenok, fig.35,*1-2*; Nedashkovsky, Rakushin, 1998-1, p.93-94, 105, fig.1,*3*; Pletneva, 1956, p.160; Pletneva, 1973, p.54, tab.6,*3*; Pletneva, 1981, p.261, fig.84,*21*; Pletneva, 1990, p.125; Polyakova, 1996, p.216, 223-224, 237-238, fig.69,*15-16*; Fyodorov-Davydov, 1966-2, p.81)[101]; the mirrors of the given type were found at Volga Bulgarian IV and V Starokuybyshevskoe settlements (Kazakov, 1991, p.90, fig.33,*36*; Kazakov E.P. Opisanie veshchevogo materiala, p.40, tab.V)[102], dated as the XIIth - XIVth and the 2nd half of the Xth - XIIIth centuries respectively, at the settlement 'Peschanyy Ostrov', dated as the end of XIIIth – first half of XIVth century, in Alekseevsky area of Tatarstan (Rudenko, 1998-1, p.62-64, 67, fig.11,*25*), near from the village Ulus in Sovetsky area of Kirov region[103], at the Bolgarskoe site of ancient city in the layer of the XIVth century[104] and 10 articles (8 of them - from the Bolgarskoe site of ancient city) are kept in NMRT[105]. Obviously, one of the most late analogies is the article from barrow 70 of the burial ground Bakhtiyarovka II (Kriger V.A. Otchet ob arkheologicheskikh issledovaniyakh, fig.105, 108,*10*)[106], where woman is buried in alcove, with observance of kybla, with Muslim amulet case and with dirhems of Janibek (Saray al-Djedid 747 A.H.-1) and Birdibek (Gulistan 759 A.H.-2). Probably, the type was formed in the second half of the VIIIth - IXth century (Flerov, p.179, fig.20,*17*).

Besides, on the Uvek site of ancient city the fragment of a large lateral handle of a massive mirror was found. This mirror cannot be related to any section, as the form of the rim of the given article is impossible to establish. The appearance, the small-structure moulding, the alloy, and also the image of a lotus flower on the return side (fig.40,*13*) speak about the Chinese origin of the sample. A fragment, close by the thickness and the form to the given one, was found on the Bolgarskoe site of ancient city[107].

The research of the Uvek mirrors collection kept in the funds of the museums, besides the introduction of the unpublished earlier materials to the research reports, allows also to make some conclusions.

We think that the analysis of the images on mirrors enables to trace the sources and stages of the genesis of their plots.

The mirrors with the image of fishes (Types A1 and B1) – the symbol of eternal movement and numerous posterity - were

98 NMRT N 5363-46, AA8-5 (3 items), AA8-8, AA8-15; KOMK N 33363/69; SOMK N NVSP 42736; BGIAZ N 212-9, Maklasheevskoe settlement, investigations of M.M.Kaveev, 1987.

99 NMRT N 5363-45, AA7-24; N 5363-46, AA8-5.

100 VOKM N-?, Bakhtiyarovka-82.

101 VOKM N 23980/21, Bakhtiyarovka-II-84, 70-1/11; EKM N 241. Semyonovskaya fort on Azov Sea, excavations of I.V.Volkov, 1996. In one nomadic barrow in the Northern Black Sea region such mirror was found together with dirhem of Uzbek, 725 A.H. (Dobrolyubsky, p.112, tab.VI).

102 BGIAZ NN 176-623; 176-833.

103 KOMK N 33363/68.

104 BGIAZ N 248-194; trench CXII, 1992, excavations of V.S.Baranov.

105 NMRT N 5363-46, AA8-1, AA8-16; N 7798, AA8-1, old N 20027.

106 VOKM N 23980/21.

107 NMRT N 5363-46, inventory N 6456.

widely spread in the medieval East. This plot is known on the coins of Bulgar of the XIIIth century and Saray of the XIVth century and also in the Iranian and Indian art (Galkin, 1985, p.188, 192, fig.2,*1,6*, 4,*7,10*). As the earliest samples of one of the most widespread in the Golden Horde types of mirrors with the image of fishes it is necessary to consider the articles with massive wide rim (fig.39,*4*), defined by the researchers as Chinese and chzhurchzhen (Lubo-Lesnichenko, 1975, p.72; Smirnov, 1951, p.116; Shavkunov, 1960, p.235; Shavkunov, 1981, p.98; Shavkunov, 1990, p.132). At the same time, in the Golden Horde period time there are similar mirrors with high narrow rim (Type A1, fig.37,*1-2*). Besides these local replications of Chinese mirrors in the Golden Horde new, introduced from the Far East, variations of the plot with fishes (fig.39,*2,5*) appeared also.

The mirrors with the dragons' images (types A3, B6 and B8) - symbols of imperial authority, firstly appeared in China. Similar Golden Horde articles were already cast with quite a high quality from Chinese samples. The mirrors of the type A3 (fig.37,*4-5*, 38) are rather schematic imitations of the articles of the XIIth - XIVth centuries, copying the Chinese mirrors of the IIIrd century AD (Lubo-Lesnichenko, 1975, p.117-118). It is necessary to search for sources of types B6 and B8 in Sung and chzhurchzhen (Tszin) empires, whence festoon mirrors and the mirrors with dragons were distributed in the XIIth - XIIIth centuries in the Far East and Southern Siberia (Lubo-Lesnichenko, 1975, p.71, 87, fig.55, 79; Shavkunov, 1981, p.105-106; Shavkunov, 1990, p.131-132, 278-279, tab.61,*3*, 62,*4*; Shavkunov, Khorev, Trigub, p.226-228, fig. 4).

To the series of imported Far Eastern articles and the Volga region copies of Chinese mirrors also it is possible to attribute the mirrors with the image of Chinese hieroglyphs (Type B4), children with chrysanthemums (Type B5) and, presumably, the fragment with a figure of a monkey (Type B2). Articles with moving one after another animals also have Eastern-Asian prototypes (Type A7); these mirrors made on Tang samples of the VIIIth – IXth centuries, were widely spread in the Golden Horde period.

The mirrors with ornamentation as S-like figures and as 4 convex ledges (types A8 and C2) also have backgrounds in the Far East. Hemisphere ledges is a widespread ornament on Chinese mirrors, since Han dynasty (Lubo-Lesnichenko, 1975, p.39, 117, fig.6, 105; Smirnov, 1951, p.117). Articles similar to ours appeared in China on the boundary of the common era and already by the end of the Ist - first half of the IInd century AD penetrated into areas of the Low Don, Kuban region and Low Volga region (Guguev, Treyster, p.143-147, fig.1-2, 3,*4-5*; Prokhorova, Guguev, p.153, 157, fig.11; Rupert, Todd, tab.II, V, VII, NN 15, 34, 420; Swallow, N 53). Articles, close by external shape, were spread in early medieval Fergana (Gorbunova, fig.18,*21*; Litvinsky, p.99, 103, tab.25,*6*) and in Trans-Baykal region (Sosnovsky, p.62, fig.12; Tal'ko-Gryntsevich, tab.XII,*3c*). At the same time, probably, the final type of mirrors was generated in the central (Volga region) areas of the Golden Horde, where this plot was probably brought by Central Asian nomads.

Mirrors with vegetative ornament (the types A2, B3, B7) have in their composition the Central Asian-Iranian motives (Fyodorov-Davydov, 1976, p.166). Close floral-vegetative ornament is present in decoration of the mausoleum of Fakhr ad-Din Razi in Urgench (Pribytkova, p.194-195, fig.29-30) and Guri-Emir in Samarkand (Borodina, p.198, 200, fig.39, 42), and also on the grey clay fragment of stamped vessel from the Uvek site of ancient city[108]. Similar ornamentation was used also in Egypt in the XIIIth – XVth centuries[109]. The copy with arabesques (the type B7) has a belt with blessing inscriptions. Obviously, in the early Golden Horde time in the Volga region the mirrors with similar vegetative ornament, but without the belt with blessing were spread (type B3). Soon, probably, the further simplification of this type of mirrors took place: articles had narrow high rim, they are of much smaller size and executed not in convex, but cut and dried flat technique (type A2), but with preservation of bases of the former composition – blossoming buds, growing alternately from the edge and from the centre. As for the date of the Type A2, practically all similar articles were found on monuments actively functioning in the 2nd half of the XIIIth – XIVth centuries. Probably, a smaller interval of their distribution will come to light later; now the exact binding to the date is given by barrows near the village Zaumor'e with burials of the 40-s - beginning of the 60-s of the XIVth century: barrow 7, grave 1 - found together with coins of Uzbek and Janibek (Lyakhov, Yakubovsky, p.176, 179), barrow 14 - in one of the burials silver dirhems of Janibek 745-753 A.H. (1344-1353) were found, and in the other one - the mirror of the considered type (Lyakhov, 1992, p.164, 166).

Mirrors with al-Boraks (Type A4) - 'lightnings'. Al-Boraks are mythological creatures of extraordinary speed, on one of which Mohammed in one night was transferred by air from al-Ka'bah to Jerusalem and back (Piotrovsky, p.163). Muslim peoples imagined this creature as follows: 'Its body seemed to be made of the most precious diamonds. Crest was shining with whiteness, which it is impossible to imitate, and consisted, apparently, of noble pearls. Ears were as two emeralds and the fast eyes similar to rubies sparkled as the evening star Venus. Behind itself it was dragging a fire tail similar to the fire tails of awful comets. To everyone's amazement, it had a face of a charming girl. A pair of wonderfully shining wings rising on its back carried the monster as fast as lightning through immense ether spaces' (Erdman, p.274). Similar mirrors were originated from the Middle East and the Central Asia, whence they were widely distributed on Eurasian steppes and their surroundings in the second half of the XIIIth - XIVth centuries (Vinogradov, 1987, p.267).

Mirrors with the image of 'must of animals' may be related to the articles originating from the fine art tradition of the Muslim East (Type A9), since similar mirrors with a circular Arabic inscription were found in Minusinsk trough (Lubo-Lesnichenko, 1975, p.104-105, fig.99, N 287; Radlov, p.28, 124, tab.IX; Erdman, p.273, 275), as well as articles decorated with the network of animals heads and a head of a person in a crown (Type A5), the drawing on which was developed in

[108] SOMK N NVSP 31539 (SUAK 1850/12).

[109] GE, exposition.

Table 3. Distribution of mirrors from Saratov region and adjoining territories according to the number of types and items.

Section	Uvek site of ancient city				Nomadic burials			
	Number of types		number of items		number of types		number of items	
	abs.	%	abs.	%	abs.	%	abs.	%
A	10	34.5	34	54.8	9	28.2	10	25.6
B	9	31	16	25.8	4	12.5	4	10.3
C	2	6.9	2	3.2	2	6.1	2	5.1
D	7	24.1	7	11.3	14	43.8	20	51.3
E	1	3.5	3	4.9	3	9.4	3	7.7
Total	29	100	62	100	32	100	39	100

the Golden Horde, in the opinion of M.G. Kramarovsky, under the influence of Islamic art, coming from Syria-Egyptian and, probably, Saljuqid regions (Vinogradov, 1987, p.268).

Mirrors with the geometrical ornament that was found on the Uvek articles were spread in the Eastern European steppes in Polovtsian time (Pletneva, 1956; Pletneva, 1981; Fyodorov-Davydov, 1966-2), this ornament remained during all the Golden Horde period. The origin of Polovtsian articles is directly connected with Alan-Caucasian and Saltovo-Mayatskaya culture traditions of manufacturing the bronze mirrors (Pletneva, 1990, p.124-125; Polyakova, 1977, p.80-81); it is necessary only to stipulate that some elements of the ornament (for example, dents on the edge of the article) occurred even on the mirrors of late Sarmatian period (Arsen'eva, p.22-23, fig.2,*2-3*; Gmyrya, p.255, fig.1-2; Gurenko, Sitnikov, Skvortsov, Surkov, p.59, fig.6,*4*; Sadykova, p.260, 272-273, fig.10,*2*, 11,*1-2*).

Thus, probably, it is necessary to admit that the principle of mirrors' division on Sections concerning the form of the rim, suggested by G.F.Polyakova (Polyakova, 1977), is justified, since this attribute definitely correlates with types of the images on the mirrors. So for mirrors with low bolster-like rim and without expressed rim (Sections D and E) geometrical ornamentation is characteristic. Vegetative ornaments, images of fishes, dragons, animals etc are characteristic for mirrors with wide flat and narrow high rims (Sections A and B). It is possible to allocate certain plots peculiar for each of these sections.

Let us carry out the comparison of the prevalence of types and items of different sections in two completely independent selections (tab.3). The first selection is represented by the described above collection of mirrors from the Uvek site of ancient city, the second – by the mirrors from nomadic burials (see Nedashkovsky, Rakushin, 1998-1, p.87-108).

Judging by the variety of types, the mirrors with narrow high rim (Section A) can be found both from the site of ancient city and from nomadic barrows with approximately the same frequency. However, with the population of the Golden Horde Ukek the articles of this group were much more popular (they make 54.8% of all mirrors found at the Uvek site of ancient city) than within steppe nomads (25.6%). The articles of Section B (mainly having the Far East prototypes) were wider distributed at the site of ancient city than in burials of the nomads, both by the number of types and by the number of items. Mirrors of sections C, D and E (it is possible that they should be considered as one section - concerning the classification of G.F.Polyakova, Section B-I), distributed in the Eastern Europe in pre-Mongolian time, were much more popular within the nomads than with the townspeople of Ukek[110]: materials of barrows show 59.3% and 64.1% (the number of types and items accordingly), on the Uvek site of ancient city - 34.5 % and 19.4%. As a whole, we can conclude that the mirrors were wider spread in cities, however there they differed by a smaller variety of types than within the nomads.

In the Golden Horde cities, the Far East, Central Asian and Iranian traditions of mirrors manufacturing had a great influence. They affected sections A and B (distributed in the second half of the XIIIth - XIVth centuries), though the mirrors of Polovtsian type affected sections C, D and E. In steppe in the Golden Horde epoch, despite of presence of replications from imported mirrors, types of kipchaks shape continued to develop.

About the ways of mirrors manufacturing it is necessary to note that all of them are cast, but they were cast differently: in a rigid (stone) mould[111] - articles with well elaborated relief, or in a clay form made by the printing of a finished mirror, sometimes broken – the last case is well shown on the type C1. Both ways were applied in the XIIth - XIVth centuries in the Volga Bulgaria (Grekov, Kalinin, p.54, tab.XIV; Polyakova, 1996, p.160, fig.56,*5*, 58,*9*), in the Low Volga region (Fyodorov-Davydov, 1994, p.185; Fyodorov-Davydov, 1984, p.178, fig.107,*2*) and in the Far East (Kon'kova, p.79).

[110]The opposite fact is committed about the Bulgar: mirrors of this group, judging by the number of items, were in absolute dominance (Polyakova, 1996, p.236).

Concerning the chemical structure of the examined bronze mirrors it is necessary to say that after V.V.Chelintsev only the author (see § 2.4) studied it. Chemical analysis of the Uvek collection by modern methods is a task of further researches. However now, operating with the available, rather little, data (Chelintsev, p.153-166), it is possible to conclude that all investigated mirrors (Sections A and B by our classification; the origin of some samples is not known) make, by chemical structure, a rather compact group: Cu - 66.7-74.96%, Sn - 18.29-26.09%, Pb - 0.23-9.16%, impurity - 1.22-5.28%. In this group it is difficult to divide the Sections A and B, previously allocated by us, though some differences in the structure of alloys were noticed.

Comparing the results of the analysis of Uvek articles with the data on chronologically close mirrors from Minusinsk trough (Lubo-Lesnichenko, 1975, p.132-149) it is easy to conclude that practically by all parameters the Siberian mirrors of the XIIth - XIVth centuries, even typologically close to the selection of V.V.Chelintsev, sharply differ from those from the Low Volga region (mainly by the larger content of tin and smaller content of copper in the last ones). This fact is obviously explained by the existence of different recipes of an alloy, and consequently, of different centres of manufacturing; however more complete conclusions can be made only on the basis of the further detailed researches of the structure of the articles.

The features of decorative setting, being connected to particular technological methods of mirrors manufacturing (form of the rim and holder, alloy, mirror's size), allow to allocate several groups of mirrors. The mirrors of sections D and E make a group of articles distributed mainly among steppe nomads of Eurasia (Polyakova, 1980, p.146-147). Mirrors of Sections A and B are local, made in the European part of Ulus Jochi, and imported mainly from the Far East. Researchers of the Far East mirrors fairly consider the narrow vertical rim (section A) uncharacteristic to the Far East mirrors (Shavkunov, Khorev, Trigub, p.223); hence, mirrors of the section A, distributed in the East Europe and in Minusinsk trough, possibly may be considered as made by the local craftsmen, while the articles from the Far East belonging to Section B served as samples for them. Mirrors of Section C make a small transitive group.

Chronologically it is possible to attribute all mirrors, judging by analogies, to the Golden Horde epoch; only some separate types can be dated by the earlier time - from the second half of the XIth - XIIth centuries.

In conclusion it would be necessary to note that a rather large share of types of the Far East origin in the Uvek collection of mirrors is, probably, not casual. Obviously, in the toreutics of Ukek, found not later than the 50-s of the XIIIth century, the influence of the so-called 'imperial iconography', which was characteristic to the early Jochid stage of the Golden Horde culture (the 40-s - 50-s of the XIIIth century - 1300) was strongly displayed. According to M.G.Kramarovsky, this influence disappeared in the middle Jochid period - at the end of the XIIIth - first half of the XIVth century (Kramarovsky, 1991, p.13).

§ 2.3. Articles of armament and daily life

The excavations of the Volga region cities of the Golden Horde epoch usually does not give a rich material for the characteristic of armaments of the settled population of Ulus Jochi. Therefore its complex of battle means is practically not investigated. In this connection the small collection of the *armament articles* gathered on the Uvek site of ancient city, makes significant interest, as it demonstrates new material about the set of arms of a Golden Horde warriors.

Unfortunately, there are no specific mentions of the circumstances in which the finds considered below were made, which complicates their location on the areas and objects of the site of ancient city, their correspondence with complexes of wares and the definition of their chronology (it is possible, however, that the finds of armament articles are connected with the situation of the city destruction).

The armament of the Ukek population from the collections of museums is represented by finds of spear-heads, axes, mace-heads, a kisten', daggers, battle knifes, fingering for the stretching of bow, a pomme of a helmet (?), ceramic bombs, a stone ball, stirrups and horseshoes, and also a pomme of a banner (bunchuk).

All three spears, found at the site of ancient city, have various forms. The first spear-head is distinguished by a square-like in section, narrow extended spire-like edge (length of the edge is 18 cm, the width is 1 cm). Smoothly extending hub of the spear is broken off, and the remained length is 5 cm, its diameter is 2.5 cm (fig.41,*1*). Similar spear-heads were widely spread in the XIIth - XIIIth centuries, when they were known in Rus (Goncharov, p.92; Zverugo, p.101; Kirpichnikov, 1966, p.15-16, tab.IV,*11-13*; Kirpichnikov, 1978, p.80-81, fig.1,*I*; Nikol'skaya, 1974, p.38, fig.13,*10*), in the Volga Bulgaria (Izmaylov, p.58-65, fig.30,*IB*, 32,*3*, 33, 34,*1*, 35,*1*, 36,*3*; Kazakov, 1991, p.99-100, fig.35,*11-14*; Rudenko, 1995, p.12; Khuzin, 1985, p.179, tab.60,*3-4*), and within the nomads of South Russian steppes (Pletneva, 1973, tab.3,*4*, 28,*12*, 31,*13*). In general, such extended spire-like lances were used in the East Europe up to the XVIth - XVIIth centuries (Kirpichnikov, Khlopin, p.151, fig.11), and, judging by the Ukek materials, they are characteristic also for the Golden Horde warriors in the second half of the XIIIth - XIVth centuries.

The second spear-head (fig.41,*2*) has three-edged in section and extended sphenoid edge (length 12 cm, width 1.8 cm) with sloping shoulders of spear and lengthened hub (length 11.8 cm, diameter 3 cm). On the end of the thulium the aperture for lining the spear-head to the shaft remained. The finds of three-edged spear-heads are practically unknown, which complicates the search for analogies for comparison. It is dated, most likely, as the XIVth century.

The third spear-head has extended-leaf-like form of the edge,

[111] On the Uvek site two fragments of casting moulds for mirrors were found (fig.62,*1-2*, 63).

lens-like in section (fig.41,*3*). The hub is broken off. Its size is the following: whole length - 16 cm, length of the edge- 10.5 cm, width of the edge - 2.6 cm, diameter of the hub - 2 cm. As a whole, similar spear-heads were distributed in pre-Mongolian period (Izmaylov, p.72-73, fig.30,*IV*, 42,*1-3*; Kirpichnikov, 1978, p.81, fig.1,*IIA*; Nikol'skaya, 1974, p.38, fig.12,*1*; Pletneva, 1973, tab.27,*17*; Fyodorov-Davydov, 1966-2, p.24, fig.3; Khuzin, 1985, p.14-15, tab.IX,*4*). Extended-leaf-like form of the edge made it a universal weapon both for horseman and infantryman that promoted preservation of their popularity up to the XVth - XVIth centuries.

The submitted spear-heads from Ukek allow to make the important conclusion about the presence of shaft weapons in the arsenal of the Golden Horde warriors. The presence of narrow cut lances, 'designed mainly for effective punching of the metal armour' (Kirpichnikov, 1966, p.16), among the armament of the Ukek population is rather symptomatic. It is determined by the tactical application of this weapon, which, undoubtedly, is connected with the existence of man-at-arms cavalry, working in formation and using battering-ram spear blows for the first rush (Kirpichnikov, 1966, p.16, 22). The find of the universal spear-head of the leaf-like form testifies the presence of light cavalry and infantry. It is important to note that all spears probably have the prototypes in the armament of the previous epoch that testifies the syncretic character of the Golden Horde weapons.

The find from the territory of the site of ancient city, kept in the funds of the Saratov museum is also indicative. It represents a fragment of bronze mace-head, which relates to the type of battle pommes with four pyramidal thorns surrounded by eight small convexities, the space between which is filled with two-row rope braiding (fig.41,*4,a-b*). Usually in such maces only the case was made of bronze (thickness up to 4-5 mm), which is confirmed by the fragment of our find. All the rest space of pomme (except an aperture for handle) was filled by lead. Similar weapons were widely known in Russia (Goncharov, fig.9,*1*; Karger, p.71, fig.10; Kirpichnikov, 1966, p.51-52, 55; Kirpichnikov, 1978, p.83-86, fig.3,*III*, 4,*3*), and also they were found in the territory of the Volga Bulgaria (Izmaylov, p.100-102, fig.69,*2-3*; Kazakov, Rudenko, Begovatov, p.52-53, fig.7,*39*)[112], Upper Kama region[113], on Don (*Katalog arkheologicheskikh kollektsy*, tab.22,*6*), on Dnestr (Kravchenko, p.84, fig.33,*3*; Spinei, fig.23,*1,3-4*) and in Scandinavia (Gottenrot, tab.29,*54*). The date of such maces is defined by the separate researchers as the end of the XIIth - first half of the XIIIth centuries (Kirpichnikov, 1966, p.55), though, judging by finds from Ukek, Khersones (Kolesnikova, p.266-267, fig.2a) and Scandinavian countries, they continued to be used in the XIIIth - XIVth centuries.

In the exposition of State Hermitage another bronze mace-head from the Uvek site – 'shestopyor' in perfect condition is exposed (N ZO-159, 7273,17). The height of the ware is 10 cm, diameter of the high plus - 3 cm; the object has a small spherical top. Such maces were spread in East Europe in the second half of XIIIth - XIVth century.

The find of another hit subject of arms – an iron kisten' - is also interesting. It has a round form with narrow under-square allotted eyelet with under-rectangular aperture for the belt (fig.41,*5*). A surface of the kisten' is smooth. The height is 6.5 cm, diameter - 4 cm, weight - 267 g. Kisten's, as the hitting weapon, were widely spread in the East Europe already in the Xth century. They were especially popular in the XIIth - XIIIth centuries in the territory of Old Rus and the Volga Bulgaria.

In the set of the nomads' armament the hit weapon for close-in fighting is represented by a rather small number of finds (Fyodorov-Davydov, 1966-2, p.32). This fact is sometimes used to treat this weapon as 'uncharacteristic' for the steppe warriors. However, the presence of this weapon is stated for the warriors of Ulus Jochi by both written (*Kniga Marko Polo*, p.231, 235) and art (Gorelik, fig.4,*15-16*) sources. All this, and also finds from Ukek and other cities of the Low Volga region, forces to consider that the hitting weapons (maces and kisten's) being an effective additional weapon of man-at-arms, had certain popularity among the Golden Horde warriors, first of all among the noble warriors-knights.

In the collection of the armament from Ukek the axes are presented also. They can be divided into battle and universal axes by weight, size and details of the device (Kirpichnikov, 1966, p.29).

To the first group of the specialised battle axes belongs an article with a low (up to 3 cm) hammer-like expansion at the top part of the butt and narrow sphenoid edge with the length of 8-9 cm (fig.42,*1*). Similar axes were rather widely spread in all Eastern Europe at the end of Ist - first half of IInd millennium AD (Izmaylov, p.77-80, fig.44,*AIa*, 45,*2*).

The second group - universal - unites the axes, which had wide application as universal (household and battle) weapon. Concerning the form of sheft-holes and 'cheeks' they can be divided into a number of types. To the section A it is possible to attribute a pole-axe with two pairs of round 'cheeks' with low (about 2 cm) under-quadrangle butt (fig.42,*2*). The sources of the design of the similar forms of head's back part may be found in cultures connected by their origin with the Saltovo-Mayatsky one. Such types are available among the finds of the Xth - XIIIth centuries from the territory of the Volga Bulgaria and from adjoining Finno-Ugrian lands (Izmaylov, p.82-83, fig.44,*BI*, 49; Rudenko, 1998-2, p.21, 29, fig.6,*7*; Savchenkova, p.14, fig.2,*2*; Sharifullin, p.40 and further).

The pole-axes from the funds of NMRT belong to the type A. They can be characterised by extended head and edge retracted to the bilt (fig.42,*3-4*); height of the axes is 15-17 cm, width of an edge is 12-14 cm, diameter of the socket is about 3.5 cm. These pole-axes were most typical items of the 'Bulgarian' type (Section A), which occurrence is connected to the development of working axes to the universal campaign-battle forms. The greatest distribution of similar axes takes place in the Middle Volga region and, mainly, in

[112] NMRT N 5654, AA13-29, old N 10388, Bul.15.

[113] The Il'neshskoe site. Reported by L.D.Makarov.

the Volga Bulgaria in the Xth - XIVth centuries (Izmaylov, p.85-87, fig.44,*BIII*, 52-55; Kazakov, Rudenko, Begovatov, p.46-47, fig.3,*4*; Rudenko, 1998-2, p.21, 29, fig.6,*6*; Savchenkova, p.14, 16, fig.2,*12-13*; Sharifullin, p.41), they were also widely spread in Rus (Boguslavsky, p.102, fig.1,*3*; Kirpichnikov, 1978, p.82-83, fig.2,*II*).

The following Section B includes axes with two (or one) pairs of under-triangular 'cheeks' or without them, with an oval sheft-hole and without a beaked butt. The axes with such head structure and various types of edges are rather characteristic of all Eastern Europe, but they are most numerous in Old Russian and Finno-Ugric monuments. This forces to consider them as articles with Finno-Russian origin (Izmaylov, p.87-88; Kirpichnikov, 1966, p.38), which does not exclude their use in the Volga Bulgaria and in the Golden Horde.

Type B I (fig.42,*7*) is represented by an axe from the funds of NMRT, which has two pairs of under-triangular 'cheeks' and a sphenoid edge - (height of the head is 16.5 cm, width - 11 cm, diameter of sheft-hole - 3 cm). Such axes are widely represented in the Volga region monuments of the end of Ist - beginning of IInd millennium AD, and in Rus and Volga Bulgaria they are more characteristic for the XIIth - XIVth centuries (Golubeva, p.123; Izmaylov, p.88-90, fig.44,*BI*, 56-57; Savchenkova, p.14-15, fig.2,*7*).

Type B 2 (fig.42,*5-6*) includes two finds from the Saratov museum which have no displayed gudgeons on the butt but have a wide sphenoid edge (the length of the head - 15 cm, width - 7-8 cm, diameter of the sheft-hole - up to 3.5 cm). These finds also are characteristic for the monuments of the Eastern Europe of the Xth - XIVth centuries (Monakhov, 1991, p.174, fig.4,*1-4*; Savchenkova, p.14, 16, fig.2,*9*).

The type B 3 (fig.42,*8*) is represented by the find (funds of NMRT) of axe with a head, with a rather narrow edge with a notch (the length of the edge - 15 cm, width - 9 cm). Similar axes were characteristic for the monuments of the north-east of Europe in the Xth - XIVth centuries (Boguslavsky, p.102, fig.1,*10*; Izmaylov, p.91-93, fig.44,*GII*, 62,*1*; Kirpichnikov, 1966, p.37-38; Monakhov, 1991, p.174, fig.4,*5-6*; Savchenkova, p.14, 16, fig.2,*14*)[114].

As a whole all finds of battle and universal axes from Ukek are represented by types widely distributed even from pre-Mongolian time in the Middle Volga region. The finds of pole-axes from Ukek expand our knowledge about the distribution of similar types of axes, probably, up to the end of the XIVth century. The appearance of these axes in Ukek (especially of Section A) also testifies the significant influence of Volga Bulgarian military culture on the Golden Horde culture. Simultaneously the presence of pole-axes among the armament complex of the Ukek population testifies to the universality of the weapon set of the Golden Horde population. Also it proves the presence of some elements of infantry equipment in it.

Also there is a mentioning about a 'large curve sword' found on the site of ancient city (Medoks, 1892, p.646) - obviously a sabre is meant.

As the additional arms the population of Ukek used, probably, battle knifes. The division of knifes by functions is rather complex, though the opinion of A.N.Kirpichnikov that all knifes with length of the blade more than 20 cm are the arms objects is rather convincing (Kirpichnikov, 1966, p.72). In the collection from Ukek there are two such knifes with the length of 21 and 22.5 cm and width of 1.5 and 2.5 cm accordingly (fig.43,*3-4*). Both knifes have beaked stop-pidge. One knife has aie on the blade. Such type of knifes is known in the Eastern Europe from the VIIIth century (Mikheev, p.29, fig.9) and was used in household and, probably, in military affairs by many nations. Another type of knifes, which was used by the inhabitants of Ukek, is differed by a narrow long blade (31 cm) and long tang with a small loop at the end (fig.43,*2*). This original group of knifes occurs from the areas which were under the influence of Saltovo tribes (the Don region, Danube Bulgaria, Volga Bulgaria). Sometimes these knifes are considered as used for cattle slaughter for the ritual purposes (Mikheev, p.29, fig.19,*32*), however, their battle significance may not be excluded.

Except these knifes one additional arms object was found. It can be defined as a dagger (fig.43,*1*). It has a long narrow blade with the broken off end (length - 31 cm, width - 1.3 cm). The dagger has a flattened guard and an extended handle (12 cm). The similar type of daggers is known in materials of cities of Eastern Europe - Novgorod, Bulgar (Izmaylov, p.55-56, 199, fig.28,*3-4*, 62,*1*; Savchenkova, p.69-70, fig.32,*12*) and Bilyar - and is dated as the end of the XIIth - XIVth centuries. Besides one more small fragment of the dagger with lens-like in section blade was found in the site of ancient city (fig.46,*2*). Most likely, the occurrence of this additional weapon is connected with the wide circulation of additional stab arms among men-at-arms.

Unfortunately, there are not enough finds showing the set of armament for the distance fight. However it is undoubtedly presented in the arsenal of Ukek warriors. This fact is proved by the presence of arrowheads in the Ukek collections (fig.8-9; *Perechen' predmetov*, p.65; Archives of IIMK, fund 1, 1895, file 122, p.20), which, however, have not been preserved nowadays, bone fingering for stretching the bow and also by the ornamented facings for the quivers of the XIIIth – XIVth centuries, found at the Uvek site of ancient city (Malinovskaya, p.171, tab.X,*33-34*). An arrowheads – bone, rhombic in section, (fig.46,*1*) and iron leaf-like (fig.46,*10*), armour-piercing (fig.46,*13*), 'srezens' (fig.46,*9,11-12,14*) - are known also from the settlements in the neighbourhood of Ukek. Similar bone arrowheads are known in nomadic antiquities of Eastern Europe and Mongolia of the XIIIth - XIVth centuries (Kriger, p.177, 181, fig.4,*6-9*, 8,*5*; Nemerov, p.224-226, fig.8,*9,14-16*; Symonovich, p.111, fig.51,*4*). 'Srezen-like' arrowheads of similar forms were widely spread in Eastern Europe and Central Asia in the XIIIth - XIVth centuries (Garustovich, Rakushin, Yaminov, tab.III,*12*, VIII,*24-25*, IX,*12*, XI,*2-3,11,13*, XV,*15*, XX,*3*, XXVI,*12,17*, XXVII,*39*; Kazakov, 1991, p.94, 96, fig.34,*18*; Medvedev, 1966, p.53-56, fig.1,*1-2*, 2,*2-9*, 3,*1,4,5,7*; Nemerov, p.215-

[114] KOMK N 6/4 and without inventory N.

217, fig.2,*3-6*; Rudenko, 1995, p.12; Savchenkova, p.72, 75-76, fig.33,*11-13*; Fyodorov-Davydov, 1966-2, p.26, 28, 116, fig.3,*9, BIX, BXI*).

To the fragments of protective armour it is possible to attribute two finds: a small iron article from the Uvek site of ancient city (fig.46,*3*), presumably a pomme of a helmet, and a detail of an iron plate armour (fig.46,*4*), found during the excavation of a settlement Podgornoe.

On the site of ancient city four fragments of thick-walled hollow clay spheres were found. They are of grey-brown colours with apertures in the walls covered by uninterrupted burnishing (fig.47, 48,*2-3*). They are melted and completely scorched from within. Similar whole sphere from Uvek, with the diameter of 14.6 cm, is shown in the exposition of SOMK[115]. Similar articles with small ceramic balls inside were found at the Vodyanskoe (Fyodorov-Davydov, 2001, p.192-194, tab.100,*1-2*)[116], Selitrennoe, Tsarevskoe and Madzharskoe (Minaeva, 1968, p.285, fig.1,*2*; Fyodorov-Davydov, 2001, p.194) sites of ancient cities, at Hmelevskoe I settlement in Ukek region (Nedashkovsky L.F. Otchet o razvedochnykh issledovaniyakh v Saratovskom rayone v 1998 godu, p.6), in Azov (Volkov, 1992-1, p.6-7, 20, tab.1,*B6*; Volkov, 1993, p.145, fig.1-3, 4,*1*; Galkin, 1975, p.257-258, fig.5,*19*), at the roofs of the burned down dwellings in Saraychik and Ak-tobe site (Galkin, 1998). A ceramic ball was found in the Kazan Kremlin in the layer of the XVth - first half of the XVIth century (Khuzin, Sharifullin, Khlebnikova, Nabiullin, Sitdikov, p.26). It is possible that such spheres, filled with a liquid mixture on the basis of petroleum, served as incendiary bombs[117]. However I.V.Volkov who, specially studied these articles, came to the conclusion about the use of the given spheres for various chemical reactions (Volkov, 1992-1, p.6-7; Volkov, 1993, p.145-154). Stone hewn ball also occurs from Uvek (fig.48,*1*); we not exclude its later origin, though according to the written sources the artillery was used for the first time in the territory the Golden Horde in 1360.

The important part of the armament complex is horse equipment, which is represented by finds of five stirrups, 3 horseshoes and 3 debacle thorns. The first type of stirrups (1 item) has roundish form (height - 13 cm, width - 13 cm), with a strongly bent foot (width - 3 cm) going approximately from a half of the height, which is supplied with three edges of rigidity (fig.44,*1*). Usually it is supposed that similar stirrups may be related to pre-Mongolian times (Kirpichnikov, 1973, p.53, tab.XV,*12*; Fyodorov-Davydov, 1965-3, p.62-63, fig.1; Fyodorov-Davydov, 1966-2, p.12, fig.1), but the find from Ukek forces to consider that some items of such battle foots were used later.

The second type (2 items) has oval-triangular (fig.44,*3-4*) contour (height - 12 cm, width - 13 cm) and wide flat horizontal foot (width - up to 6cm). Such stirrups (type EI according to G.A.Fyodorov-Davydov) are well known from nomadic burials of Eastern Europe. They are dated as the end of the XIIIth - XIVth centuries (Fyodorov-Davydov, 1965-3, p.62-63, fig.1; Fyodorov-Davydov, 1966-2, p.12, fig.1).

The third type (2 items) differs by the ring-shaped form (height - 13 cm, width - 14 cm); it is sharply bent with the foot extending to the bottom. This foot is supplied by oval interceptions and neck (fig.44,*2*). The step of the foot is rather narrow (3.5 cm), it is curved on width. There is also a fragment of a handle of the similar stirrup, decorated with the dents (fig.46,*8*). As a whole, by the details of design the given finds can be related to stirrups of the type EIII (according to the typology of G.A.Fyodorov-Davydov), which are dated as the second half of the XIIIth - XIVth centuries (Fyodorov-Davydov, 1965-3, p.62-63, fig.1; Fyodorov-Davydov, 1966-2, p.12, fig.1).

The finds of three horseshoes belong also to articles of horse equipment. All of them are of the same type, they have the arch form with small (up to 2 cm) thorn at the top part of the arch and protruded wide forged ends (height up to 1 cm) (fig.45,*1-3*). The sizes of them are various: length - from 7 up to 11 cm, width - 7-8 cm. All horseshoes are made from under-square wire (thickness - 0.5-1.3 cm). The horseshoes of a similar type were found in the antiquities of Eurasia: the analogies from the Volga Bulgaria (Savchenkova, p.63-66, fig.29,*1-8*)[118], the Selitrennoe site of ancient city (Fyodorov-Davydov, 1984, fig.96,*15*) and from Otrar (Akishev, Baypakov, Erzakovich, 1987, p.68, fig.23,*8-10*) are known. The presence of these finds, which existence had been unproved (Kirpichnikov, 1973, p.83), testifies to the presence of man-at-arms cavalry, for which the use of horseshoes was (especially in the XIVth - XVth centuries) characteristic (Kirpichnikov, 1973, p.83-84).

Among the horse equipment the finds of three debacle thorns (fig.45,*4*, 46,*6-7*) are interesting. On settlement in the site Podstepnoe, situated in the Ukek district, the similar article (fig.46,*5*) was found. Similar debacle thorns were widely used in Rus, in the Volga region and in the Kama region in the XIth - XVth centuries (Byrnya, 1991, p.97-98, fig.6,*2*; Voronin, p.43, fig.16,*1*; Darkevich, Borisevich, p.309, tab.81,*9*; Kazakov, 1991, p.67, fig.26,*2-3*; Malygin, p.81, fig.4,*10*; Nikitin, 1963, p.83, fig.25,*19*; Oborin, p.105, fig.45,*9*; Perevozchikov, 1997, p.56, 67, fig.11,*2-3*; Rabinovich, p.50, fig.23,*10*; Rozenfel'dt, 1960, p.276-278, fig.1,*4-5*; Savel'eva, Klenov, p.18, fig.7,*5*; Savchenkova, p.65-66, fig.30; Sedov, 1956, p.111, fig.43,*10*; Fyodorov-Davydov, 1994, p.182, fig.41,*7*; Fyodorov-Davydov, 1984, fig.98,*3-4*)[119].

One more article that looks like a flat bi-dent with curls on the

[115] N SMK 57851 / A-2944 (AO 1011).

[116] SOMK NN SMK 57849 (AO 952), NVSP 30675 (AO 791/12). The place, where another whole sphere from Saratov museum (N SMK 57850, AO 2905) were found, is unknown.

[117] Ceramic sphere-like shells for catapults were adapted in China in XIIth-XIIIth centuries (Shkolyar, p.156-157, 190-191, fig.52). Missile artillery was in equipment of the Golden Horde army – preserved information about using catapults by Mongols during the storm of the Old Russian cities (Grekov, Yakubovsky, 1950, p.214), and also in campaigns in the Central Europe.

[118] Laishevskoe settlement. Reported by K.A.Rudenko.

ends (the high, protruded chisel is supplied with a ring at the end of the curl). On the end there is a tang for the cap with the length of 12 cm. The length of the article is 49 cm, width – 19.5 cm (fig.43,*5*). Analogies of the article are not known, though it is quite possible that this is the shaft halo of a banner or a bunchuk.

Thus, the investigated set of armament and horse equipment available at the disposal of the Ukek population, gives the image of a set of battle devices of the Golden Horde warriors. The whole arsenal is related to the second half of the XIIIth - XIVth centuries, though it is possible that the large part of the articles is connected to catastrophic destruction of the city by Timur army in 1395. This collection is very scanting and accidental. But judging by the presence of the narrow cut lances, maces, kistens and roundish stirrups and horseshoes, we can create the image of the advanced complex of the armament describing an arsenal of the man-at-arms knight. At the same time, it is necessary to note the presence in this set of universal armament articles such as leaf-like spears, battle pole-axes. They show the presence of the city emergency volunteer corps among the warriors of Ukek. Simultaneously it is necessary to specify that a number of finds from Ukek having analogies in particular in the Volga Bulgaria, emphasise the sincratic character of the military culture of the Jochid state.

Characterising the complex of armament from Ukek, it is necessary to note also, that its analysis forces us to doubt a number of ideas settled in the Russian armament-science, concerning the archaic character of the Golden Horde set of arms and equipment. Even this small example allows to speak about the presence in the Golden Horde of the cavalry, armed with dented lances, maces and kistens, about the horse equipment of horseshoes and thorns etc. All this expands the idea of the set of arms of the city warriors (noble ones and townspeople) and about the military culture of Ulus Jochi as a whole. It is doubtless that the further researches of the Golden Horde armament, both from excavation of ancient cities and from burials, will allow to expand and deepen our ideas about the development of the arms of all Eastern Europe of the XIIIth - XIVth centuries.

The household articles of metal are represented by vessels, locks and keys, and also some other described below articles.

From the Golden Horde Ukek a number of metal (copper-bronze, cast-iron and silver) vessels originated. Mainly they are represented by fragments and components which are kept nowadays in Saratov (SOMK) and Kazan (NMRT) museums. Some vessels have not been preserved, however their descriptions and sometimes even photos were kept.

Copper-bronze vessels

In the collection of SOMK there are 9 rivets from vessels made by rolling up of a copper sheet in a cone. 4 of these rivets were not used (fig.49,*1-4*), 5 - are flattened and deformed (fig.49,*5-9*), that say that they were used. Rivets of such forms, in the opinion of K.A.Rudenko, were used for lining handles of basins; they are well known from the monuments of the Volga Bulgaria (Rudenko, 1991, p.356, fig.3a; Rudenko, 1992-2, p.115) and Low Volga region[120].

Two larger rivets in the shape of a probe with the diameter of about 1 cm with the diameter of the head of about 3 cm (fig.49,*11-12*) have no exact analogues; so their later date than the Golden Horde time may not be excluded.

The third type of rivets is represented by a single item; it is a piece of a copper wire with the diameter of about 4 mm forged in the apertures, which are prepared in the lining parts of the vessel (fig.49,*10*). Such rivets were used for lining handles of cooking pots (Rudenko, 1991, p.356, fig.3a).

There is also a small (length 3.4 cm) copper handle of a vessel (fig.49,*13*) and a fragment of handle of cooking pot (fig.36,*9*).

The bottom of cast bronze bowl (?) has been preserved with the diameter of about 14 cm (fig.49,*19*), with the thickness of 2-4 mm. Similar vessels are known from medieval nomadic burials of Eastern Europe (Fyodorov-Davydov, 1966-2, p.87, fig.15,*2*, BII-III). The cast medieval bronze vessels of the Middle Volga region are dated as the XIIth - beginning of the XIVth century. (Rudenko, 1991, p.360).

The walls of cast vessels are presented by three large fragments (fig.49,*14-15*)[121]. One of them is decorated with carved and circular ornament (fig.49,*14*); bronze vessels with circular ornaments from Ukek, dated from the IXth up to the XIVth century are known in the Middle Volga region, Iran[122], Central Asia and Western Siberia (Kazakov, 1991, p.113, fig.19,*31*; Litvinsky, Solov'ev, p.165, 182, fig.47,*3*; Nikitina, Rudenko, p.53-57, fig.1-3, 5, 7-8; Rudenko, Shaykhutdinov, p.67, fig.XXIV,*11*; Khuzin, Drozdova, p.146, fig.4).

Obviously it is possible to relate parts of small fragments and scraps of copper sheets from the Uvek site of ancient city (the funds of SOMK) to the walls of vessels[123].

A cast bronze vessel with slightly bent nose-spout is very well preserved[124]. The vessel is decorated with carved vegetative ornament (braiding, shoots with buds). In the central wide ornamental belt, interrupted by four lockets, there is a stylised Arabic inscription: 'Undying glory and long safe life, both health and friends' (translation by Yu.E.Pyrsov). The outside surface of the article was silvered. Similar articles (one of them is fragmented), made by the Middle East prototypes, occurred from the Bolgarskoe site of ancient city (Darkevich, 1975-1, p.237, 242, fig.5; Polyakova, 1996, p.241-242, 244, fig.77,*1,3-5*)[125]; close by form vessels from

[119] GE, exposition. Many similar articles were found in the different monuments in the pool of Vyatka and on Upper Kama (reported by L.D.Makarov).

[120] Settlement in Podstepnoe site. SOMK N NVSP 22228 (AO 860/5).

[121] NMRT N 5365-32.

[122] GE, exposition.

[123] NN 1220; 1229; 1245; NVSP 18037, SUAK 1776.

[124] SOMK N SMK 50587, SUAK 2785.

Karakorum (Evtyukhova, 1965, p.282, fig.144), Simferopol hoard (Kramarovsky, 2001, p.342) and from the Selitrennoe site of ancient city (Fyodorov-Davydov, 1984, fig.106,*3*) are known. Later tinned hand-made articles similar to the given vessel by the form are known[126].

One small bronze vessel was completely kept. It is a flat bottle with sloping shoulders and cylindrical neck (fig.49,*16*); the sizes of the vessel - 1.5*3*5.3 cm. The bottle is decorated with superimposed wire forming in the top part a handle for hanging. A copper bottle close by sizes and the form of the neck is presented in the collection of Novocherkassk Museum (*Katalog arkheologicheskikh kollektsy*, tab.29,*20*).

Two articles made of thin bronze sheets (fig.49,*17-18*) are obviously lids of small vessels. Their top parts are decorated with convex rosettes of 8 and 9 'petals'. At the centre they have small handles - brackets (on one item it is broken off). Similar articles are known from the territory of the Volga Bulgaria[127], from the Golden Horde settlement Ackcha-Gelin I in Khorezm (Nerazik, p.151, fig.97,*17*), from burial N 124 of Ydzhyd'el'sky burial ground, which is possible to date as the XIIIth century (Savel'eva, 1987, p.61, fig.17,*6*; Savel'eva, 1991, p.108, fig.1,*24*), from Belorechenskie barrows of the XIVth - XVth centuries, from materials of Staryy Orkhey, dated not later than the beginning of the 60-s of the XIVth century (Byrnya, 1974, p.234-235, fig.3,*8*; Spinei, fig.40,*15*), from the Northern Caucasus and from Siberia (Smirnov, 1909, tab.XII, N 33, tab.CVII, N 253, tab.CVIII-CIX, N 264). There is also an article close to the mentioned above that served as a lid – a plug of a small copper vessel, in which a hoard of silver coins was found. The overwhelming majority of these coins date back to the epoch of Toktamysh (Tizengauzen, 1887); the date of the latest coin of the hoard is 792 A.H. (1390-1391). The decorative element of the door handle from the Tsarevskoe site of ancient city (Grekov, Yakubovsky, 1950, fig.30)[128] has the form of a convex eight petal rosette similar to the examined Uvek articles.

The negative of a photo of one more unpreserved bronze lid of a vessel with silver incrustation, bought by F.V.Duhovnikov in Uvek in 1893 is kept in the photo Archives of IIMK (fig.50). The ware had a high central handle; it was decorated with the ornament of a plait and a circular Arabic inscription: 'Glory and success, and power, and happiness, and health, and mercy of Allah, and longevity always to the owner of this'. This object has parallels in the materials of Bolgarskoe site (Mukhametshin, Khakimzyanov, p.294-296, fig.83); its Iranian origin is most probable.

Besides the already listed articles the following articles from the Uvek site of ancient city were found and described in the beginning of the XXth century: 1) 'A jag of red copper, tinned. Outside and inside it is greatly spoilt by oxide. With a convex thin rim on the neck, without a handle'; 2) 'a copper vessel (saucer)'; 3) 'a copper article as a small jag' (KZVM, Vol.I, NN 443, 1057, 1579).

Cast-iron vessels

In the collection of NMRT there is a fragment of cast-iron bowl with a rim curved to the outside (fig.51,*1*). The diameter of the rim is about 12 cm. There are no casting seams on the fragment, however at the centre of the bowl bottom there is a so-called 'cake' – an increase of thickness of the article indicating the place of the metal supply during the moulding. This cake can be found on all medieval cast-iron cauldrons (Efimova, 1958, p.306; Terekhova, p.77, fig.8). Larger cast-iron bowls are known from the Bulgar site of ancient city (Efimova, 1958, p.306-308, fig.8,*1-2*).

Cauldrons are the most widely distributed cast-iron articles of the Golden Horde epoch. Four items of them are represented in the funds of SOMK (fig.51,*2-5*). Three remained vessels' rims have various forms: two of them (fig.51,*2-3*) are with an inflow to the inside, and another one (fig.51,*5*) - with a flat top having a small batter to the inside. The form of cast-iron cauldrons is well represented by the item (kept in several fragments), found on the site of ancient city on the slope of the mountain Kalancha near the building of a fire brigade in 1986 (fig.51,*5*). This vessel with the diameter of about 46.5 cm had horizontally located handles about 7 cm wide, protruding almost by 3 cm; on the article the vertical cast seams - places of joining of the parts of the form - can be easily seen.

The cast-iron cauldrons and their fragments, unfortunately not kept till nowadays, are mentioned in the publications of the XIXth century and in archival materials: the whole vessels and their fragments, among them there are those found 'on sazhen depth... a cast-iron cauldron, with a stone vessel and two small clay pots in it' (*Nakhodki na Uveke / Iz oblastnoy pechati*, p.390), also they are mentioned among the finds of 1892 and 1893 (Medoks, 1892, p.644; *Uvekskie drevnosti*, p.158), and one more whole vessel and one fragment were found in July, 1909 (KZVM, Vol.I, NN 1018, 1027).

The cast-iron cauldrons of practically the same forms and sizes, as well as extant Uvek articles (fig.51,*2-5*), are widely distributed on the monuments of the Middle and Low Volga region: on Aga-Bazar in the layers of the 2nd half of the XIVth - beginning of the XVth century, on the Bolgarskoe site of ancient city (Efimova, 1958, p.300, 306, 308; Savchenkova, p.58-59, fig.24, 25,*1-6*; Smirnov, 1951, p. 114-115)[129], in the layers of the Kazan Kremlin of the XIVth - first half of the XVIth century (Khuzin, Sharifullin, Khlebnikova, Nabiullin, Sitdikov, p.26)[130], on Laishevskoe (Rudenko, 1992-1, p.82; Starostin, Kazakov, p.135, fig.2,*10*), Bilyarskoe III (Gazimzyanov I.G., Galimova M.Sh., Gubaydullin A.M., Valiullina S.I., Drozdova G.I., Nabiullin N.G., Starostin P.N., Khuzin F.Sh., Kazakov E.P., p.199), Damba I (Rudenko, 1999,

[125] GIM N 26910.

[126] AKU-2/211; Museum of Ethnography of the USSR Nations (Saint Petersburg), exposition.

[127] AKU-2/212-213.

[128] GE N Sar-162.

[129] BGIAZ NN B-77; 72-1; 205-76 (PAE-86, trench XCVIII, excavations of N.D.Aksenova); 248-211 (the last article - 2 fragments - was found in the trench CXII in 1992, excavations of V.S.Baranov); 689-614 (trench CXXII, 1996, dated by coins of 1280-1351, excavations of V.S. Baranov).

p.68, fig.5,*17-19*, 6,*2,24-26*), Balynguzskoe[131] and Maklasheevskoe[132] settlements, the Kamaevskoe fortified site of the XIVth - XVth centuries (Fakhrutdinov, p.142), on the Tsarevskoe, Vodyanskoe, Selitrennoe sites of ancient cities in the materials of the 30-s - beginning of the 90-s of the XIVth century (Egorov, Poluboyarinova, p.54, 69; Mukhamadiev, 1974, p.87; Fyodorov-Davydov, 1966-3, p.240, fig.4; Fyodorov-Davydov, Bulatov, p.221; Fyodorov-Davydov, Vayner, Guseva, p.113-114; Fyodorov-Davydov, Vayner, Mukhamadiev, p.98, 135, 155, 160) and on many other settlements situated on the Golden Horde territory or near it (Rudenko, 1998-1, p.64-65, fig.9,*6-7*; Ryazanov, p.32-35, 51-54, 57-59, fig.1,*2*, 2,*1-4*, 3-4, 7-9; Tropin, p.209-210, fig.1,*10*). Also one cauldron was found in the nomadic burial. Concerning the dating of the Volga region cast-iron vessels, obviously, it is necessary to agree with the opinion of A.P.Smirnov, A.M.Efimova and G.A.Fyodorov-Davydov about the beginning of their manufacture not earlier than the beginning of the XIVth century (Efimova, 1958, p.306; Smirnov, 1951, p.114-115; Fyodorov-Davydov, 1966-2, p.89), but in recent years appears opinion that they were in use in the Golden Horde since the middle of XIIIth century (Ryazanov, p.4). The cast-iron cauldrons almost completely identical to the Uvek ones, are known from Otrar (Akishev, Baypakov, Erzakovich, 1987, p.68, fig.23,*3-4*) and from Minusinsk trough[133]; other types were spread in Mongolia (Terekhova, p.71, fig.3).

The finds of cast-iron vessels at the Uvek site of ancient city allowed A.M.Efimova to assume that 'fusion of cast-iron and casting of cast-iron articles' were carried out in Uvek (Efimova, 1958, p.308).

Silver vessels

In the publications of the beginning of the XXth century there are data on three silver vessels, which were not preserved till nowadays; all of them were found in a burials in 1913.

The first article – a cup with the diameter of 9 cm - was decorated on its bottom with the image of a lion going to the left, with the tail, thrown on its back (fig.52). The image is surrounded with vegetative ornamentation; the cup had 12 convex lockets - 6 of them were smooth, with gilding, 3 had vegetative ornament, and 3 - the image of a predatory bird with the head turned back (Kramarovsky, 2001, p.106, fig.54; Krotkov, 1915, p.120-121, fig.8). The vessel was found in burial N 1 in a mausoleum in a brick crypt. The similar composite decorating (12 lockets, 3 of which with vegetative ornament, 3 – with zoomorphgic motives, and others 6 - smooth) is known on big silver cup from Saygatinskoe sanctuary (Kramarovsky, 2001, p.96, 104-105, fig.48, 53; Fedorova, p.196, fig.3).

The second vessel was also found during excavation of the mausoleum in grave N 5. It is small non-ornamented cup with traces of gilding (fig.53). It has a horizontal lateral handle with five (?) festoons (Krotkov, 1915, p.125, fig.14). Vessels with festoon handles were widely spread in the VIIIth - XIth centuries, they may be found in the materials of the XIIIth - XIVth centuries (Darkevich, 1976, tab.8,*5,7*, 9,*2-3,4-8*, 16,*6*, 17,*4,8*, 42,*4-7*; Kramarovsky, 1974, p.18; Smirnov, 1909, tab.LXV,*110,112-113*, LXVII,*117*, LXXVII,*139*, XCII,*170-171*, CIV,*229*, CVI,*233*, CXVII,*302*, CXXVIII,*322*; *Sokrovishcha Priob'ya*, p.14-16, 42-43, 85-89, 203-207, fig.34, 77; Fyodorov-Davydov, 1976, p.171-172, fig.132-133).

The third vessel is gilt, rich ornamented (with six pedalled rosette at the bottom, with three roundish lockets and three five-segment palmettos on the walls) cup with the diameter of 14 cm with the handle as a rather schematic dragon head, which eyes are marked with amethyst inserts (fig.54). The find was published by A.A.Spitsyn. He does not specify a place whence it occurred, however according to A.A.Krotkov and archival materials the vessel should be related the complex from crypt opened by engineer Ueysky (Krotkov, 1915, p.126-127; Spitsyn, 1914, p.104, 106, fig.40; KZVM, Vol.II, N 2429). Similar bowls (without the handle) were known in the Golden Horde time in the Upper Kama, the Middle Ob' (here is found also the dish with similar ornament), in the Low Volga region, Northern Black Sea region and in the Northern Caucasus (Kramarovsky, 1991, p.16-17, fig.17, 20; Kramarovsky, 2001, p.90-92, 227, 243, fig.42-44, 120; Smirnov, 1909, tab.CI,*248*, CXXVII,*315*; Fedorova, p.196-197, fig.4-5; Khripunov, p.192-193, fig.1,*14*). M.G. Kramarovsky dates the given group of the art metal as the end of the XIIIth - first half of the XIVth century (Kramarovsky, 1991, p.16). The handle of Uvek vessel as the dragon head can be referred to subgroup A, by classification of M.G.Kramarovsky, - without fluttering crest; it reveals some affinity with the handle of a gold ladle of the middle of the XIIIth - beginning of the XIVth century from the site Gashun-Usta and with dragon handles on the later vessel from the Tsarevskoe site of ancient city (Kramarovsky, 1973, p.68-69, tab.III,*2-3*; Kramarovsky, 1975-1, p.74, fig.4; Kramarovsky, 1994, p.196, fig.13; Kramarovsky, 2001, p.48, 62, 235-236, fig.21,*10*, 23; Smirnov, 1909, tab.CV,*230,232*; Fedorov-Davydov, 1984, p.96, fig.139).

Besides the vessels, on the Uvek site of ancient city at the end of the XIXth - beginning of the XXth century plenty of other metal articles (locks and keys, separate bronze articles) were found. Partially they will be described below.

Iron locks. They are represented by the following types:

1. Type B (by classification of B.A.Kolchin) is the most numerous - there are 4 cases of bi-cylinder locks (fig.55,*1-4*) and 3 springs (fig.55,*9-10,13*); besides them it is necessary to attribute to the given type the case fragments of 4 other articles (fig.55,*5-8*). Judging by the design features of these Uvek locks (these features are clear in 3 items), they were simple four-spring (2 items) and four-spring with a fixing device (1 item); in one case the aperture for a key is protected by a ledge of the n-figurative form (fig.55,*4*).

[130] Trench I, 1994, plots A/5, A/6; excavations of A.Kh.Khalikov.

[131] Investigations of F.A.Akhmetgalin, 1994.

[132] BGIAZ N 212-28; investigations of M.M.Kaveev, 1991.

[133] AKU-81/75.

The handles of springs have small draw off to the outside - displacement concerning the big cylinder central line, that, as well as the disposition of springs in the top two thirds of the round in section handle holder, probably is a chronological attribute inherent only in the Golden Horde articles.

According to B.A.Kolchin's conclusions, locks of type B were made in Rus from the middle of the XIIth till the end of the XIVth century and in the beginning of the XVth century they fell into disuse (*Arkheologiya / Drevnyaya Rus'*, p.15, 252, tab.6,*3-5*; Kolchin, 1959, p.82; Kolchin, 1982, p.162). Besides Old Rus where this type was mostly distributed, locks of type B were spread in the Volga Bulgaria (Kazakov, 1991, p.74; Rudenko, 1995, p.8-9; Rudenko, 1998-1, p.64-65, fig.9,*16*; Rudenko, 1998-2, p.27, fig.3,*2-9*; Rudenko, 1999, p.76, fig.6,*1,6*; Savchenkova, p.40-42, fig.14,*1-8,10*, 15, 17; Tallgren, 1918, tab.V,*21*), in the Golden Horde settlements situated in the Low Volga region (Barinov, 1997-2, fig.2,*3*; Egorov, Poluboyarinova, p.76, tab.I,*10*; Kasankin, 1994, p.100, fig.2,*2,7*; Kasankin, 1997-1, p.237, fig.2,*14*; Fyodorov-Davydov, Vayner, Guseva, p.116-117, tab.III,*8-10*, IV,*5*; Fyodorov-Davydov, Vayner, Mukhamadiev, p.165-166, tab.IV,*1,5*, V,*6*; Fyodorov-Davydov, 1984, fig.97,*1*; Barinov D.G. Otchet ob arkheologicheskikh rabotakh v Engel'sskom, p.11, fig.39,*5*; Lopatin V.A. Arkheologicheskie issledovaniya, fig.72,*7*)[134], in Azak (Perevozchikov, 1997, p.57, 68, fig.12,*1,6*) and in Staryy Orkhey (Abyzova, 1985, p.156-157, fig.2,*3*; Byrnya, 1991, p.95-96, fig.5,*4*; Byrnya, Russev, p.122-123, fig.1,*3*).

2. Type E (by B.A.Kolchin) is represented by one item (fig.55,*11*). This lock has a long pin decorated with decorative flutes on the end. On the pin there are 2 surfs: probably this massive lock was the door one, and surfs were beat into a door and jamb.

In Rus the articles of this type do not prevail, though are met since pre-Mongolian time (*Arkheologiya / Drevnyaya Rus'*, p.252, tab.6,*31*; Kolchin, 1953, p.157; Ovsyannikov, p.258, fig.1,*1-9*); in the territory of the Volga Bulgaria this type was widely spread both in pre-Mongolian and in the Golden Horde time (Kazakov, 1991, p.71-73, fig.28,*2-5*, 29,*1-4*; Rudenko, 1995, p.8; Rudenko, 1998-2, p.27, fig.3,*1*; Savchenkova, p.42-45, fig.16,*1-2*)[135]. Three locks of type E were found on the Tsarevskoe site of ancient city in the layer of the middle XIVth century (Fyodorov-Davydov, Vayner, Mukhamadiev, p.165, tab.IV,*2-4*), one more was found in Staryy Orkhey, in a dwelling dated by coins of 752-753 A.H. (Ryaboy, p.115, 118-119, fig.2,*4*). The article similar to the examined one from Uvek is known in the materials of Far East of the pre-Mongolian period (Len'kov, p.126-127, fig.35).

3. One of the locks can be allocated to a special type close by the principle of action to the type E (fig.55,*12*): probably, the unpreserved iron pin - spring was inserted into the apertures of one piece with the case and handle. It is possible that this lock was used for locking horse fetters. Similar form of locks is known from the monuments of Penza region (Belorybkin, fig.2,*21*).

Bronze snaps are divided into two groups: zoomorphic and barrel-like.

The first group of articles is represented by 11 items (halves of compound snaps), decorated with circular ornament and having the decorative bevels on the edges.

Type 1 (1 item). Small snap in the form of a cow (fig.56,*8*). Similar articles are known from the Volga Bulgarian I Semenovskoe settlement of the Xth - XIth centuries (Kazakov, 1991, p.90, fig.33,*1*), from the Bolgarskoe site of ancient city (Polyakova, 1996, p.249, 251-252, fig.78,*4*)[136], from vicinities of Bilyarsk[137] and, without circular ornament, from Khersones (Latysheva, p.218, fig.2,*7-8*). The basic part of analogies should be dated as the XIth - beginning of the XIIIth century. However, the originality of the Uvek article and its affinity to the following described type force us to relate its cast to the XIIIth century.

Type 2 (10 items). The articles as small horses (fig.36,*11-13*, 56,*1-7*). The wide circle of analogies in the Volga Bulgaria is known, on the Bulgar site of ancient city the same article was found in a dwelling of the middle - second half of the XIVth century (Berezin, fig.11; Valeev, fig.68,*14-16*; Valeev, Valeeva-Suleymanova, fig.33,*11*; Vysotsky, tab.V,*9-10*; Latysheva, p.218-220, fig.2,*10-11*; Poluboyarinova, 1987, p.61, fig.5,*3*; Polyakova, 1996, p.249-251, fig.78,*2-3*; Rudenko, 1998-2, p.21, 26, fig.2,*2*; Rudenko, 1999, p.67, fig.6,*22*; Tallgren, 1918, tab.V,*14*)[138]. Besides Bulgaria such snaps were found at the Golden Horde monuments, for example on the Selitrennoe (Fyodorov-Davydov, 1994, p.194, fig.43,*6*; Fyodorov-Davydov, 1984, fig.104,*8-9*; Fedorov-Davydov, 1984, p.90, fig.82) and the Tsarevskoe sites of ancient cities, including in the last's layer of the 40-s - 60-s of the XIVth century (Fyodorov-Davydov, 1964-2, p.266, fig.14,*3*; Fyodorov-Davydov, Vayner, Mukhamadiev, p.164, tab.III,*6*)[139], in Staryy Orkhey (Fyodorov-Davydov, 1994, p.198) and on the Kovrovskoe fortified site of the XIIIth - XVIth centuries in Kirov region (Makarov, 1983). The bronze article with very much unique proportions, but with slants to the edges and circular ornaments, found on settlement Kashenka in Belarus (Poluboyarinova, 1993, p.107-108, fig.39,*2*) is known. More remote parallels are available in medieval materials of many Muslim countries and Byzantium (Fyodorov-Davydov, 1994, p.198). Concerning the date of this type, probably it is necessary to agree with the opinion of the previous researchers (Poluboyarinova, 1993, p.98; Khalikov, 1971, p.107) about the manufacture of such articles in the Golden Horde period. However it is possible to assume, that the developing of this type of snaps as horses figures (including other forms, without circular ornament) occurred

[134] The settlement in Podstepnoe site. SOMK NN NVSP 22240-22241 (AO 860/1-2), 30207 (AO 862/12).

[135] NMRT NN 5427-34, 8831-69, inventory NN 1340, 1777.

[136] BGIAZ N 75-73.

[137] NMRT N 5427-130.

[138] AKU-128/67,75; BGIAZ N 161-210, Starokuybyshevskoe fort, finds of 1983, exposition; NMRT NN 5363-47, 5427-136, 5649, AA10-9,11-16,22,27.

[139] GIM N 75989, inventory 1666.

even in pre-Mongolian time.

Type 3 (2 items). It relates to the second group of bronze snaps - with barrel-like case; one of the articles has a lateral loop (fig.56,*9-10*). Similar articles are known from Bolgarskoe (Polyakova, 1996, p.249-250, fig.78,*6*)[140] and Selitrennoe (Fyodorov-Davydov, 1984, fig.104,*11*) sites of ancient cities.

In the Uvek collection there are 3 bronze springs from locks of the types described above, they were preserved fragmentarily (fig.57,*1-3*). This articles have analogies in materials from the Tsarevskoe of the middle of the XIVth century (Fyodorov-Davydov, Vayner, Guseva, p.117, tab.IV,*12*), Selitrennoe (Fyodorov-Davydov, 1994, p.194, fig.43,*1*; Fyodorov-Davydov, 1984, fig.104,*7,12*) and Vodyanskoe (Zaykovsky, 1908, fig.1,*18*) sites, and also among the finds from the Volga Bulgaria (Polyakova, 1996, p.249, 252, fig.78,*7*; Rudenko, Shaykhutdinov, fig.XXIV,*13*; Tallgren, 1918, p.32-33, fig.47)[141] and from the Kovrovskoe fortified site in the pool of Vyatka[142].

The keys are represented by 5 items; 2 of them are bronze and 3 - iron.

Type 1 (1 item). Bronze key (fig.57,*4*) obviously served for opening bronze snaps. By the design of the working part it is similar to an iron key of type 3 and with keys from Khersones (Tretesky, tab.IV,*21*, VI,*49*). Such articles are known from the Volga Bulgaria, from Vodyanskoe site of ancient city (Berezin, fig.12; Polyakova, 1996, p.249, 252, fig.78,*8*; Rudenko, 1998-2, p.26, fig.2,*1*)[143] and from the territory of Saratov region[144].

Type 2 (1 item). One more bronze key (fig.57,*5*) is similar to Novgorod iron keys for locks of type D, dated as the 2nd half of the XIVth - XVth centuries (*Arkheologiya / Drevnyaya Rus'*, p.15, 252, tab.6,*25*; Kolchin, 1959, p.87, fig.70).

Type 3 (1 item). The iron key to the lock of type B - with H-figurative working part (fig.57,6) - is similar to Old Russian ones of the middle of the XIIth - beginning of the XVth century; similar keys were spread in the Volga Bulgaria (*Arkheologiya / Drevnyaya Rus'*, p.15, 252, tab.6,*1*; Kazakov, 1991, p.72, fig.29,*13-14*; Kolchin, 1959, p.87, fig.70; Rudenko, 1998-1, p.64-65, fig.9,*17*; Rudenko, 1998-2, p.27, fig.3,*20,23*; Rudenko, 1999, p.67, fig.5,*4*; Savchenkova, p.47, fig.19,*7,10*; Khuzin, 1995, p.178, 191, 201, 203, fig.10,*17*, 23,*8-9*, 33,*15*, 35,*6*), in the Low Volga region (Kasankin, 1994, p.100, fig.2,*3-4*; Fyodorov-Davydov, 1984, fig.97,*3*; Lopatin V.A. Arkheologicheskie issledovaniya, fig.72,*6*)[145], in Staryy Orkhey (Byrnya, 1991, p.104-105, fig.12,*3*; Spinei, fig.40,*18-20*) and in the pool of Vyatka[146].

Type 4 (1 item). It is represented with a partly kept iron article which looks like a tube with a forged handle - loop on the end (fig.57,*7*). This article may be attributed to the keys from wooden inner locks. It was found on the site of ancient city in 1991 (researches of D.G.Barinov) in a building dated by coins as the 20-s - 30-s of the XIVth century. Similar keys with the basis tube were spread in Russia from the end of the Xth up to the XVth century (*Arkheologiya / Drevnyaya Rus'*, p.16, 253, tab.7,*19-23*; Gaydukov, p.151, fig.60,*1-8,10-11*; Kolchin, 1959, p.94, fig.76).

Type 5 (1 item). This iron key of later look (fig.57,*8*) should be dated not earlier than the XVIth - XVIIth centuries.

On the basis of the material described above it is possible to conclude that locks and keys used in the Golden Horde Ukek did not concede by their technical characteristics and variety of types to the articles from other Volga region cities and Old Russian monuments of the XIIIth - XIVth century.

It would be important to mention some not numerous but interesting bronze articles found accidentally on the Uvek site of ancient city and to analyse a casting moulds.

Large figured brackets with decorative slants to the edges. They served as an ornament of leather bags valves.

Type 1 (1 item). All-cast open-work bracket of the pentagon-like form with unclear rests of the image of some polymorph creature, probably a dragon (fig.57,*9*). Similar articles were known in the Golden Horde materials from the Bolgarskoe site of ancient city, from Novgorod lands (Vysotsky, p.9, tab.IV,*24*; Polyakova, 1996, p.212, 221, fig.68,*15-17*)[147] and from barrows near Ust'-Kurdyum (barrow 8) in Ukek regions.

Type 2 (2 items). Cast brackets with five apertures for linings, close by form to the type 1 (fig.57,*10-11*). One article is supplied with a superimposed ornament as a wolf (?) head fixed with the help of prong and a bronze rhombic plate (fig.57,*10*). The articles of this type are known on leather bags, found in one of the Golden Horde barrows at Atkarsk, dated by coins of Janibek as 746 A.H. (1345-1346), in nomadic burial place in Volgograd area (Kriger V.A. Otchet o raskopkakh v 1985 godu, fig.28) and in burial near the village Kvasnikovka of Saratov area (Arzyutov, 1936-1, p.88-89, fig.1; Garustovich, Rakushin, Yaminov, tab.XXII, *16*). The iron plates - stripes, with similar form, were fixed on valves of four-cornered leather bags known at medieval nomads of East Europe and in materials of the New Saray, dated by coins as the 30-s - first half of the 60-s of the XIVth century (Lyakhov, Yakubovsky, p.183, fig.5,*4*; Mamontov, Sitnikov, 1998, p.116, 123, fig.3,*2*; Fyodorov-Davydov, 1966-2, p.86, fig.12,*7*; Fyodorov-Davydov, Vayner, Mukhamadiev, p.165, tab.IV,*6*; Kriger V.A. Otchet ob arkheologicheskikh issledovaniyakh, fig.71,*2*, 135, 143,*2*, 168, 175,*1*)[148]. Similar iron articles were found on Bolgarskoe

[140] NMRT N 5363-32.

[141] AKU-2-127.

[142] Reported by L.D.Makarov.

[143] AKU-2/104; 104-2; BGIAZ N 75-71, old N 5427, Bil.72.

[144] SOMK without inventory N.

[145] AMZ, exposition. Selitrennoe site of ancient city, excavations of G.A.Fyodorov-Davydov.

[146] Nikul'chinskoe hillfort. KOMK N 56/8.

[147] BGIAZ N 22-212, 53404; NMRT NN 5363-36, AA 51-11, 5363-48, AA 51-14, 7718-12, old N 15519, 7719-12, old N 15518.

site of ancient city[149] and on the Kovrovskoe fortified site in the pool of Vyatka[150].

The form of brackets of types 2 and, especially, 1 forces to assume that they were made using as an example the Tyan Shan and South Siberian articles of the XIIth - XIVth centuries (Baypakov, 1973, p.257-258, fig.1,*6-10*, 2; Kyzlasov, 1980, p.85, fig.6,*8*). This type in the Golden Horde time was distributed and developed in East Europe (Valeev, p.93, 96, fig.34,*9,11*, 36,*21-22*; Valeev, Valeeva-Suleymanova, fig.15,*6-7,9,13*; Kolchin, 1956, p.75, fig.17,*3*; Nikol'skaya, 1921, p.151; Polyakova, 1996, p.208, 212, 220-222, fig.67,*41*, 68,*36-37*; Spitsyn, 1906-1, tab.VII,*7*)[151].

The badge (1 item). A round article ornamented by flutes as beams going from the centre, also marked by a flute (fig.57,*12*). The article, judging by its size, could serve as a decoration of horse caparison. Similar articles are known from the Selitrennoe site of ancient city (Fyodorov-Davydov, 1994, p.190, fig.40,*1*).

Another all-cast bronze article (fig.57,*13*) with large aperture at the centre has a form of stirrup with three semicircular ledges; from the return side each ledge has a pin for lining. The fragments of exactly the same articles[152] were found in 1964 on the Tsarevskoe site of ancient city (excavation trench 2) in the territory of the mansion pool dated as the end of the 50-s - the beginning of the 60-s of the XIVth century (Fyodorov-Davydov, Vayner, Guseva, p.104). Two analogies are known from the Bolgarskoe site of ancient city (Polyakova, 1996, p.162, 165, fig.58,*12*).

Alongside with the metal subjects earlier analysed by us from the Golden Horde Ukek occurs a lot of various samples of production of ferrous and non-ferrous metallurgy, a part of which, alongside with casting moulds, will be considered farther. The purpose of a part of the described hand-made articles from non-ferrous metals authentically is not known, in view of which it is noted only presumably.

Among wares from non-ferrous metals (fig.58, 59,*1-33*, 60,*1-4,7*) buttons (fig.58,*1-2,28*) are allocated: one of them is curtailed from a bronze sheet and has a soldered eyelet (fig.58,*1*), others are cast, with an ornament as notches (fig.58,*2*) and flutes with notches (fig.58,*28*). The first product (fig.58,*1*) is close to buttons from Murzihinskoe settlement of the XIth - 60-s of the XIVth century (Kazakov, Rudenko, Begovatov, p.57-58, fig.8,*31*), Nikulchinskoe fortified site[153] and Vil'gortsky burial ground of the XIIth - XIVth centuries (Savel'eva, 1971, p.211, tab.33,*16*), and the last (fig.58,*28*) has full analogy in the materials of the Old Russian Mosolovskoe settlement of second half of the XIIIth - XIVth century on the river Bityug (Tsybin, p.41-42, fig.2,*12*). Roundish cast buttons are widely presented in the materials of the East Europe of the early and advanced Middle Ages (*Arkheologiya SSSR*, p.260-261, fig.83,*30-31*, 84,*10-11*; Garustovich, Rakushin, Yaminov, p.88, 168, 308, 325, tab.V,*11*, XXII,*12,18*; Egorov, Fyodorov-Davydov, p.163, tab.VII,*1-3*; Ivanova, p.94, fig.13,*1*, 34,*1*; Islanova, p.119, fig.1,*2-3*; Kazakov, 1991, p.115, fig.40,*33,39-41*; Kazakov, Rudenko, Begovatov, 1993, p.57-58, fig.8,*29-30*; Kravchenko, p.86, fig.34,*22*; Kriger, p.186, fig.10,*15*; Maksimov, 1959, p.90-91, fig.1,*3*; Malov N.M. Otchet ob arkheologicheskikh issledovaniyakh v Kalmytskoy ASSR, Saratovskoy i Volgogradskoy oblastyakh za 1989 g., p.6, fig.4,*4,3-7*; Malygin, p.79, 81, fig.4,*21*; Mamontov, Sitnikov, 1995, p.91, 100, fig.4,*4*; Panova, 1988, p.209, 213, fig.2,*8*; Polyakova, 1996, p.196-198, fig.65,*9,11-12*; Rudenko, 1998-2, p.26, fig.1,*56-57*; Rudenko, 2000-2, p.28, 70, fig.8,*8*; Rudenko, Shaykhutdinov, p.68, fig.XXV,*12*; Savchenko, 1986, p.78, 90-91, fig.3,*2-3*, 8,*1-2,4-5*; Sedova, 1981, p.154-155, fig.61,*3-7*; Stashenkov, p.36, 47, fig.*8,2-3*; Fyodorov-Davydov, 1966-2, p.66, 70, 115, fig.12,*3*, AI-II; Fyodorov-Davydov, Bulatov, p.220-221, fig.31,*4,16*; Fyodorov-Davydov, Vayner, Mukhamadiev, p.163-164, tab.II,*29*, III,*10*; Shvetsov, p.264-265, fig.1,*5*; Nesheva, p.51-52, fig.9; Fyodorov-Davydov, 1984, p.184, ill.99,*3-5*). In Novogrudok the ceramic mould for casting such wares, dated as the XIIth - XIIIth centuries was also found (Gurevich, p.15-16, fig.2,*2*).

Little bells are represented by five items (fig.58,*3-7*), four of which are two-compound (fig.58,*3-6*), and one more handbell (?), probably of the later, than Golden Horde, origin is whole-moulded (fig.58,*7*). Inside one of the well-preserved cast little bells (fig.58,*3*) a bronze ball is clearly seen. The wares similar to these are known in materials of East Europe of the IXth - XIVth centuries (Ivanov, 1991, p.147, 157, fig.6,*11-14*; Fyodorov-Davydov G.A., 1966-2, p.66, 69-70, fig.12,*2*, V) and, in particular, Novgorod of the XIth - the beginning of the XIVth century (Sedova, 1981, p.156-157, fig.62,*9-11,15-17*, 63,*10*). Two little bells (fig.58,*5-6*) and some other objects described below (fig.58,*24*, 59,*26,34,39-41,44*, 60,*8*), were found in 1991 in a construction dated by coins as the 20-s – 30-s of the XIVth century (the author thanks D.G.Barinov for the given opportunity of publication of these finds). A similar little bell was found on the settlement at village Podgornoe of the end of the XIIIth - end of the XIVth century in the regions of Ukek (Kasankin, 1994, p.99, fig.1,*4*). Similar wares occurred in the East Europe, Central Asia and Siberia in the IXth - XIVth centuries (Darkevich, Borisevich, p.317, tab.89,*1*; Ivanov, 1991, p.147, 157, fig.6,*15*; Kravchenko, p.86, fig.34,*21*; Monakhov, 1991, p.175, 180-181, fig.5,*24-25*; Nerazik, p.106, fig.59,*10,13*; Panova, 1988, p.209, 213, fig.2,*9*; Polyakova, 1996, p.196, 200-202, fig.65,*28-29,32-34*; Rudenko, 1998-2, p.26, fig.1,*46*; Rudenko, Shaykhutdinov, p.68, fig.XXV,*21*; Savchenko, p.90-91, fig.8,*3,7*; Fyodorov-Davydov, 1966-2, p.66, 69-70, fig.12,*2*, VIII; Fyodorov-

[148] In the grave 1 of the barrow 73 of the group Bakhtiyarovka II such iron plate (Kriger V.A. Otchet ob arkheologicheskikh, fig.135, 143,*2*) was found together with a Janinbek coin (Saray al-Djedid, year?), and in the grave 1 of the barrow 5 of the group near Sennoy farm - together with the dirhems of Uzbek and Janibek, stroked in 20s - 40s of the XIVth century (Mamontov, Sitnikov, 1998, p.116, 123, fig.3,*2*).

[149] BGIAZ N 689-620/259. Trench CXXII, 1996, dated by coins of 1280-1351, excavations of V.S. Baranov.

[150] Information from L.D.Makarov, excaveted the site.

[151] BGIAZ NN 143-60, 542-59, 5717?; NMRT NN 5427; 5427-100; 7719-13, AA20-11, old N 10334.

[152] AKU N TsG-64.

[153] KOMK N NKL-60, trench 1, N 62.

Davydov, 1994, p.194, 196, fig.43,*3*; Fyodorov-Davydov, 1984, p.184, ill.99,*2,6-7,9*). On Tsarevskoe and Vodyanskoe sites of ancient cities similar objects were found at the trenches dated by coins of the 30-s - beginning of the 60-s of the XIVth century (Egorov, Fyodorov-Davydov, 1976, p.159, tab.I,*6-7*; Fyodorov-Davydov, Vayner, Guseva, p.117, tab.IV,*18*; Fyodorov-Davydov, Vayner, Mukhamadiev, p.164, tab.III,*2*), in Azak – by coins of the XIVth century (Perevozchikov, 1990, p.27, 29, fig.3,*9*), and in the Novgorod materials such little bells are dated as the second half of the XIIIth - XIVth century (Gaydukov, p.98, 158, fig.67,*11*; Sedova, 1981, p.156-157, fig.62,*12-14*). The handbell (fig.58,*7*) has analogy from the Selitrennoe site of ancient city (Fyodorov-Davydov, 1984, p.184, ill.99,*8*).

The fragment of a thin silver object of a roundish form with two apertures for fastening and a thin carved ornament (fig.58,*8*) has traces of gilding. It is possible that it is a part of a metal plate or some other ornament as the back of the subject has no ornamentation. The similar bronze metal plate with a carved ornament is known from Tsarevskoe site of ancient city (Fyodorov-Davydov, 1964-2, p.268-269, fig.16,*1*).

The round stamped ware with the relief ornament, made of a thin bronze sheet (fig.58,*9*) has a large aperture in the centre and fine apertures - for sewing on - on the edge. Presumably it is the top of a cap.

The cast bronze object (fig.58,*10*) has analogies in the materials of Vladimir, Ryazan and Torzhok of the XIIIth century (Zharnov, p.136, fig.27; Malygin, p.77, 81, fig.4,*18*), and also Kamaevskoe hillfort of the XIVth - XVth centuries (Fakhrutdinov, p.142-143, fig.24) and vicinities of Bilyarsk[154]. Researchers consider such finds to be book fasteners or pendant-amulets in a form of swords.

The purpose of three other fragmentary preserved samples of bronze casting is less clear for us (fig.58,*11-13*). One of the objects (fig.58,*11*) was decorated from one end with a statue of a bird? (the head is broken off); two more wares (fig.58,*12-13*) can be considered as decorative facings (for example, of bags, quivers etc.). The rod with an animal head, similar to the last wares, occurs from materials of Gotsky trench of Novgorod of the XIVth - XVth centuries (Rybina, p.221, fig.21,*1*). The cast bronze loops for the handle of the Italian jewellery box of the XIVth century[155] are similar to the object with a statue of a bird, but the first have apertures.

The fragment of the cast bronze ware decorated with the image of a dragon head (fig.58,*14*) has analogies from Bolgarskoe and Kamaevskoe sites of the XIVth - XVth centuries (Fakhrutdinov, p.142-143, fig.24)[156]. The complete object had the X-shaped form and from above was topped with two dragon heads looking in the different directions. In M.D.Poluboyarinova's opinion similar wares can be attributed as the bronze details of lamps having parallels in the materials of Iran of the XIIIth century (Poluboyarinova, 1978, p.100-101, fig.31; Poluboyarinova, 1993, p.31). The similar iconography of dragon heads is present on a brazier made in Egypt for Rasulid sultan of Yemen al-Malik al-Muzaffar Shams ad-din Yusuf I, ruled in 1250-1295, on Samarkand guards of daggers of the middle of the XVth century, on the Iranian golden ring of the XVth - the beginning of the XVIth century, brass candlesticks of the XVth century and vessels of the end of the XVth - XVIth centuries (Akishev, Baypakov, Erzakovich, 1981, p.169, fig.91; Dimand, p.151, 154, fig.90, 93; The *Metropolitan Museum of Art*, p.55, 88-89, fig.39, 66-68; Ward, p.103-105, fig.81-82), and also on the Iranian iron military banners of the XVIth century (*A Survey of Persian Art*, p.1433).

Very interesting are the bronze decorative nail with the hemispherical head (fig.58,*15*) and a fragment of a thimble (fig.58,*16*), similar to numerous Golden Horde wares. Thimbles of bronze, similar to this one, occur from Tsarevskoe site of ancient city, including from trench I-1963 dated by coins of the 30s - beginning of the 60s of the XIVth century (Fyodorov-Davydov, 1964-2, p.268, fig.15,*4*; Fyodorov-Davydov, Vayner, Mukhamadiev, p.164, tab.III,*3*), from Vodyanskoe site of ancient city (Egorov, Fyodorov-Davydov, p.159, tab.I,*5*) and Hmelevskoe I settlement in the regions of Ukek (trench I-1999, pit 2, researches of the author) from the constructions dated by puls of the 30-s of the XIVth century, and also from Selitrennoe site of ancient city (Fyodorov-Davydov, 1994, p.186, 199, fig.39,*5*; Fyodorov-Davydov, 1984, p.185, ill.99,*18-19*), from materials of Azak of the XIVth century (Perevozchikov, 1990, p.27, 29, fig.3,*8*), from Belgorod on Dnestr of the end of the XIIIth - XIVth century (Kravchenko, p.82, fig.32,*17*), from layers of Grodno of the XIth - XIVth centuries (Voronin, p.67, 176, fig.30,*3*, 96,*6*), from Derbent (Kudryavtsev, p.242, fig.73,*4*) and from burials of Golden Horde nomads of the Low Volga region, Don region and Kalmykiya (Bezrutsky, p.153, fig.1,*3*; Mamontov, Sitnikov, 1995, p.94, 100, fig.4,*8*; Fyodorov-Davydov, 1966-2, p.85).

Typically Golden Horde shape have a S-like parts of bronze chains (fig.58,*17-19*), made of a wire. Fragments of similar wares are found at Selitrennoe, Tsarevskoe and Vodyanskoe sites of ancient cities, in particular, at the trenches dated by coins of 30s – 60s of XIVth century (Egorov, Fyodorov-Davydov, p.162, tab.VI,*4*; Zaykovsky, 1908, p.39, fig.1,*7*; Fyodorov-Davydov, 1964-2, p.268, fig.15,*5*; Fyodorov-Davydov, 1994, p.192, 195, fig.42,*13*; Fyodorov-Davydov, Bulatov, p.219, fig.30,*5*; Fyodorov-Davydov, Vayner, Guseva, p.115, tab.II,*6*; Fyodorov-Davydov, 1984, p.182, ill.102,*1-3,5-6*). Similar iron chains are known also (Darkevich, 1974, p.67, fig.45,*13*; Nikol'skaya, 1980, p.108, fig.3,*15*), and bronze chains with 8-like parts present in materials of Saltovo-Mayatskaya culture (Dzattiaty, Tmenov, Tsutsiev, Cherdzhiev, p.162-163, fig.22; Savchenko, p.85, 88, fig.7,*22*).

The cast subject with a large aperture (fig.58,*20*) which can be determined as a fastener from horse fetters is interesting. The close object occurs from one of inlet burials of medieval nomads of the Samara Volga region (Merpert, p.32-34, fig.8,*1*). The similar ware is known from Volga-Kama

[154] NMRT N 5427-59.

[155] GE, exposition.

[156] BGIAZ N 13-653.

region[157]. Bone wares of similar types occurred in a steppe and forest strips of Eurasia from the Central Asia up to Serbia and Bulgaria, since early Middle Ages down to Golden Horde time (*Arkheologiya SSSR. Stepi Evrazii v epokhu srednevekov'ya*, p.99-100, 102, 122, 130, 132, 170, 240, 244, 260, 272, fig.19,*15,66-67*, 24,*18*, 26,*16*, 55,*39*, 72,*17*, 83,*34-35*, 94,*176*; Bogachev, Myshkin, p.67, 74, fig.4,*13*; Gaydukov, p.102, 164, fig.73,*10*; Garustovich, Rakushin, Yaminov, p.129, 311, tab.VIII,*21,26*; Darkevich, Borisevich, p.182, 276, tab.48,*3*; Dobrolyubsky, p.110, tab.IV,*2*; Ivanova, p.95, fig.45,*3*; Kazakov, 1991, p.143, fig.46,*20*; Kuza, Kovalenko, Motsya, p.24, fig.4,*34*; Fyodorov-Davydov, 1966-2, p.17, 21, 115, fig.2,*3*; Manojlovih-Nikolih, p.115, 117, fig.3,*62,64-65*)[158].

One more cast hand-made article with an aperture in the centre (fig.58,*21*) is obviously possible for attributing as a wheel from the block. Are interesting cast bronze bi-conic spindle-whorl (fig.58,*22*) and a fragment of festoon metal plate (?) with a not clear relief ornamentation (fig.58,*23*).

Three bronze weights cylindrical (fig.58,*24-25*) and barrel-like (fig.58,*29*) forms have weight of 7.58 - a weigh with two points of frequency rate, 19.38 - a weigh with six points of frequency rate, and 41.56 - a product of greater diameter without a designation of frequency rate. The analogy to a weigh with six points of frequency rate, but other weight and from a lead, is present in Drutsk of XIIIth century; relatives under the form to the biggest weigh cylindrical bronze and leaden products also are known from materials of medieval cities of Belarus of XIIIth - the beginning of XVth century (Bektineev, 1987, p.232, 234-236, fig.2,*8-9,11-12*; Bektineev, 1994, p.54, 56-58, 72, fig.14,*1-4*).

There are also two bronze scale cups having on three apertures for suspension (fig.58,*26-27*). Similar cups are well-known from Volga Bulgaria monuments of Xth-XIVth centuries (Akhtemzyanov, Gumayunov, p.211, 213, fig.2,*12*; Valeev, 1995, p.79, 133-134, fig.1,*7-10*, tab.I,*8-23*; Vysotsky, tab.IV,*16,27*; Kazakov, 1991, p.150-151, fig.48,*32-34*; Rudenko, 2000-2, p.27, 70, fig.8,*3-4*; Rudenko, Shaykhutdinov, p.67, fig.XXIV,*25-28*) and from Old Russian materials of XIIth - first half of XIIIth century (Darkevich, Borisevich, p.436-437, fig.167,*3*; Khoroshev, p.184-185, fig.6,*2*).

In collection of the Saratov museum four thin gold (90%) round plates in weight for 1.13 g (two smaller) and 1.52 g (two big), cut out of cast forged metal sheet (fig.60,*1-4*) were preserved. Wares were found in the field of a mouth of buried persons in burials 1 (fig.60,*1-2*) and 3 (fig.60,*3-4*) of the mausoleum excavated on the Uvek site of ancient city in 1913. Six similar gold objects were found in area of a skull and the top part of a chest of buried woman at excavations of a crypt (burial 3, dated by dirhem of XIIIth - beginning of XIVth century) at village Komsomol'sky of the Astrakhan region in 1989[159]. Concerning purpose of these plates, obviously, it is necessary to agree with A.A.Krotkov's opinion, that they are the imitations of coins executed from more expensive material for a putting in burials of a nobles (Krotkov, 1915, p.118-120, 123-124).

There is a lot of bronze couplings from knifes of various forms, both cast, and cut out of a metal sheet (fig.59,*1-31*). One of couplings is the coin flattened out and punched in the centre, is possible, that pul of Gulistan mintage 764 A.H. (fig.59,*29*). One of products is fixed in situ - on the handle of a knife (fig.59,*34*); on the other knife the rests of a similar bronze ware (fig.59,*35*) are fixed. There are also two bronze facings of handles of knifes (fig.59,*32-33*).

Narrow sharpened or rounded to a bottom couplings of knifes (fig.59,*2-26*) have analogies in materials of settlements Hmelevskoe I (investigations of the author of 1998, trench I, 2000) and in site 'Podstepnoe'[160] in the regions of the Ukek. The same wares are well-known and from other settlements of the Low Volga of the Golden Horde time, for example from Tsarevskoe site of ancient city - from the trenches dated by coins of 30s - the beginnings of 70s of XIVth century (Fyodorov-Davydov, Vayner, Guseva, p.119, tab.V,*9*; Fyodorov-Davydov, Vayner, Mukhamadiev, p.163, tab.II,*27*), from Selitrennoe and Vodyanskoe sites of ancient cities (Fyodorov-Davydov, 1984, p.185, ill.99,*21*). They are met on the Bolgarskoe site of ancient city[161], Murzihinskoe settlement of XIth – 60s of XIVth century (Kazakov, Rudenko, Begovatov, p.55, 60, fig.9,*62-63*), Laishevskoe settlement of XIIth-XIVth centuries (Rudenko, 2000-1, p.105-106, fig.26,A,*12*, 27,A,*19-24*; Rudenko, Shaykhutdinov, p.68, fig.XXIV,*14-15*), on Semenovskaya fortress in Azov sea coast[162], on settlement of XIIth-XIIIth centuries in site Dar'yalyk-Kul' in Khorezm (Nerazik, p.109, fig.62,*15-17*), in Kalmykiya (Malov N.M. Otchet ob arkheologicheskikh issledovaniyakh v Kalmytskoy ASSR, Saratovskoy i Volgogradskoy oblastyakh za 1989 g.) and in materials of nomads of the Golden Horde time, including last third of XIVth century (Ivanov, 1984, p.81, fig.4,*4*; Mamontov, 1993, p.167-168, fig.9,*5*). The bronze facing of a handle of a knife is known from the Bolgarskoe site of ancient city[163].

Knifes of working types are represented by various forms (fig.59,*34-44*, 60,*5-8*). All knifes are similar to wares practically from all medieval monuments of the East Europe (Kazakov, 1991, p.75-78, fig.30,*15-34*; Savchenkova, 1996, p.28-29, fig.9, 10,*6-8*). One of knifes (fig.60,*5*) was found in 1893 in burial together with iron chain armor ring (fig.60,*6*) and a cast bronze ringlet (fig.60,*7*).

Represent significant interest also the objects telling us about local manufacture of wares from non-ferrous metals. Among them two bronze cut anvils (fig.60,*9-10*), obviously serving for stamping on metal, it is possible and at manufacturing jewels. Similar anvils are known from Selitrennoe (Fyodorov-

[157] AKU N AKU-2/138.

[158] AKU N AKU-85/8-1,2,3,7,10,11.

[159] Report of V.V.Plakhov.

[160] SOMK NN NVSP 22234, AO 888/4; NVSP 22261, AO 870/21.

[161] BGIAZ N 689-519/259.

[162] Excavations of I.V.Volkov, 1996, pit 23.

[163] BGIAZ N 202-181.

Davydov, 1994, p.186, 188, fig.39,*6-7*) and Bolgarskoe (Polyakova, 1996, p.164, 166-167, fig.59,*17*) sites of ancient cities. In vicinities of Bilyarsk was found an iron anvil with fourteen facets end (Savchenkova, 1996, p.21, 23, fig.6,*14*; Smirnov, 1951, p.116, fig.53).

To jeweller toolkit may be referred also iron a chisel (fig.60,*12*) and a hammers (fig.60,*13-14*). Iron chisels of similar forms and the sizes are known from layers of the Bolgarskoe site of ancient city of the end of XIIIth – XIVth century, and also from other Volga Bulgaria and Old Russian monuments (Gaydukov, p.89, 139, fig.48,*2*; Kazakov, 1991, p.46-48, fig.15,*19-20*; Polyakova, 1996, p.164, 167, fig.59,*20*; Savchenkova, p.21-23, fig.6,*8-12*; Smirnov, 1951, p.110, fig.33-35; Tropin, 1999, p.65, fig.9,*5*). Jeweller hammers of close forms occur from the Bolgarskoe site of ancient city, including from a layer of XIVth - the beginning of XVth century (Polyakova, 1996, p.164, 166, fig.59,*16*; Savchenkova, p.21, 23, fig.6,*13*; Smirnov, 1951, p.116, fig.52) and from Kirpichno-Ostrovnoe settlement (Kazakov, 1991, p.46-48, fig.15,*32*). The same wares are known and from Old Russian monuments, including from Novgorod from the layers of second half of XIVth - the beginning of XVth century (Gaydukov, p.89-90, 139, fig.48,*5,10-11*; Darkevich, Borisevich, p.437, fig.167,*1*; Pryakhin, Vinnikov, Tsybin, p.26-27, fig.13,*10*; Tropin, 1999, p.102, fig.16,*8*).

In the Saratov museum there is a bronze filling of pouring grate of the casting mould from the Uvek site of ancient city (fig.60,*11*).

From an examined monument there is also a lot of casting moulds for manufacturing small hand-made articles from non-ferrous metals. One of them bronze (it is possible, that it is not the casting mould, but the model for its manufacturing), intended for manufacturing metal girdle clasps with a framework as the heads of dragons inverted to each other and convex rhombus-like ornament on a dashboard (fig.61,*1*). Similar girdle clasps have parallels in the European Art (Kramarovsky, 1985, p.158-159, tab.III,*12*; Fyodorov-Davydov, 1994, p.196). There is one more fragment of the black slate casting mould intending probably for casting of belt brackets with prongs (fig.61,*2*).

The casting mould from a grey stone intended for manufacturing of metal beads of two forms and belt brackets of Central Asian style (fig.61,*3*). The second side of the form is unfinished - on two 'brackets' there is no ornament, and to one is not brought the pouring grate. For dating the form it is necessary to note, that in materials of Novgorod the beads with false 'grains' meet from the second half of XIIIth century up to boundary of XIVth and XVth centuries (Sedova, 1981, p.154-155, fig.61,*9,13*).

The form from grayish limestone (fig.61,*4*) intended for casting round medallions. In two forms of grey colour fingerings were cast: two dashboard and non-dashboard (fig.61,*5*); one with rectangle dashboard and two lateral ledges, another - non-dashboard (fig.62,*4*), in same form from slate were made also medallion-like pendants. Close the first form for casting oval-dashboard and non-dashboard fingerings is known from the Bolgarskoe site of ancient city (Polyakova, 1996, p.159, fig.55,*7*), therefrom is present a fragment of the form for rings with S-like ornament on a dashboard (Polyakova, 1996, p.162, fig.58,*6*). Fingerings with a rectangular shield and two lateral ledges, relatives to the castled in the second mould (fig.62,*4*), are known both from the Uvek site of ancient city, and from other monuments of Golden Horde and adjacent territories (fig.35,*16-17*).

The large casting mould from a grey-green stone intended for casting of three convex leaf-like brackets (fig.61,*6*).

Are remarkable the unfinished moulds from grey - black slate for casting mirrors: with the diameter about 10.5 cm, with a narrow high (up to 3 mm) rim (fig.62,*1*) and with the diameter about 5.3 cm, with narrow low (0.5 mm) rim and the lateral handle (fig.62,*2*, 63). Fragments of the mirrors similar on an ornamentation of an external zone with the first form, occur from the Bolgarskoe site of ancient city[164].

On the second casting mould it is necessary to stop more in detail. It is interesting, that there is no mirrors of such form and the sizes among tens the items found at Uvek. However mirrors with the small diameter with lateral handles are known from territory of the Ukek regions, on the left bank of Volga: 3 items from a settlement in Podstepnoe site near village Shumeyka[165], 2 items from settlement near village Podgornoe dated by coins of khans from Tokta up to Toktamysh, and also from barrows near village Susly (barrow 40, 1924, it is dated by pul of Janibek) and near Pokrovsk (Nedashkovsky, Rakushin, 1998-1, p.90-91, 93, 106, 108, fig.2,*2-3,8*, 4,*8*). Similar wares as a whole are widely distributed in antiquities of Golden Horde nomads, they are known from Volga-Kama region. Most likely, made in the forms similar to ours, mirrors, according to G.A.Fyodorov-Davydov, 'were a subject of city manufacture and were delivered from cities in steppes' (Fyodorov-Davydov, 1976, p.181). The solvent townspeople, probably, preferred to use more highly artistic and qualitative wares.

Two more moulds intended for casting art pendants - closed half-moon-like with the ends (fig.62,*3*, 63; the mould of grey colour) and medallions with oval-like (fig.62,*6*, 63-64; the mould of dark green colour) ends. The first mould was wrongly published by S.A.Pletneva as the casting mould from the Volga Bulgaria (*Arkheologiya SSSR. Stepi Evrazii v epokhu srednevekov'ya*, p.240, 255, fig.79,*21*). The back of the second mould served for casting a fine zoned metal beads. For casting the same beads one more casting mould from dark grey slate (fig.62,*5*) served. Similar forms for casting a beads are known on the Upper Volga (Kris, Stanyukovich, p.90, 92, fig.1,*8*) and in Volga-Kama region[166]. To a question on dating the first casting mould (fig.62,*3*, 63) should be noted, that closed half-moon-like pendants, occurring also in Kama region, in pool of Vychegda and in Western Siberia (Ivanov, 1991, p.147, 157, fig.6,*36*; Ivanova, p.42-43, fig.12,*10,13*; Kazakov, Rudenko, Begovatov, p.57-58, fig.8,*33*; Polyakova, 1996, p.183, 187, 189-190, fig.63,*17,21*; Savel'eva, 1991,

[164] BGIAZ N 143-66; NMRT N 5363-46, AA7-24.

[165] SOMK NN NVSP 22233, (AO 888/1), NVSP 22265, (AO 870/19).

p.99, 108, fig.1,*17,19,23*; Fedorova, p.22, fig.6), in the Novgorod materials they are dated as the end of XIIth – XIIIth centuries (Sedova, 1981, p.24-26, fig.6,*5,7,10-12*).

One of published by us before finds from a grey-black stone (fig.82,*25*; Nedashkovsky, 1997-1, p.229-230, fig.2,*25*) is probably unfinished mould for casting of an fourteen facets eyelet of a cross-enkolpion. A.A.Spitsyn published the casting mould for manufacturing of star-like kolts with pseudo-'grains' (Spitsyn, 1914, p.101-102, fig.24), also occurring from the Uvek site of ancient city and similar to the Kiev wares.

The above-stated material, is thought, testifies about enough high level of development in the Ukek of manufacture of wares from non-ferrous metals (in museum collections, for example, there are no ceramic casting moulds from a monument) about what indirectly speaks also a typological variety of finds of the examined category occurring from the Uvek site of ancient city.

§ 2.4. The chemical composition of the non-ferrous articles

This paragraph summarises the results of analyses of the chemical composition of 149 non-ferrous articles (tab.4) originating from the Uvek site of ancient city (71 item, NN 7-77) and settlement Shiroky Buerak (3 items, NN 135-137), dating back to the second half of the XIIIth – XIVth centuries, and also from Hmelevskoe I settlement (75 items, NN 1, 3-6, 78-134, 138-150), dating back to the end of the XIIIth – XIVth centuries. All investigated articles from the Uvek site of the ancient city come from the collection of the National Museum of the Republic of Tatarstan (Kazan) consisting of the materials collected in the XIXth century. Objects from the settlement Shiroky Buerak and a part of investigated materials from Hmelevskoe I settlement (17 items) come from the author's excavations of 1999-2001, the rest are the occasional finds of the same years.

The analytical part of the investigation was carried out by the method of emission-spectral analysis in the laboratory of archaeological technology of the Institute of History of Material Culture of Russian Academy of Sciences by A.N.Egorkov.

The description of the articles' composition is presented according to the groups determined by their functions.

The brackets of belt sets (NN 56-58, 75, 102) and a belt tip (N 103) have the following composition: copper – from 63.77% to 90.65%, tin – not more than 16%, lead – from 0.4% to 18%, zinc – not more than 23%, arsenic – not more than 0.3%, antimony – not more than 0.4%. Cast belt rings (NN 67-68, 70-71, 76) are of the following composition: copper – from 55.47% to 87.58%, tin – from 1% to 25%, lead – from 0.4% to 17%, zinc – from 0.5% to 28%, arsenic – not more than 0.2%, antimony – from 0.05% to 0.2%. Similar alloys were used for making details of belts in the Far East in the XIIth – XIIIth centuries (Kon'kova, p.78, tab.3; Len'kov, p.141-142, tab.13-14) and Volga Bulgaria (Khlebnikova, 1996, p.270, 275-277, tab.I, III-IV).

One of the two investigated cast finger rings (N 63) appeared to be silver, while another (N 104) is made of a complex alloy, never met at the analysed finger rings from Novgorod (Konovalov, 1974, p.142-150).

Wire bracelets (NN 14, 69) have the following composition: copper – from 97.46% to 98.86%, tin – not more than 0.2%, lead – from 0.4% to 1%, zinc – not found, arsenic – not more than 0.5%, antimony – 0.4%. One of the bracelets with traces of gilding (N 69) is close by the diameter of the wire to gilded and silver-covered pins of the Far East of the XIIth – XIIIth centuries, also made of "pure" copper (Kon'kova, p.81-82).

Plaque bracelets (NN 11, 62, 64, 78, 89) have a slightly different composition which can be explained by the method of their manufacturing by moulding or moulding with further carving: copper – from 79.78% to 88.95%, tin – not more than 10%, lead – from 0.6% to 8%, zinc – from 1.2% to 11%, arsenic – not more than 0.6%, antimony – not more than 0.4%. All articles are made of brasses of multi-component alloys with a significant quantity of zinc, as well as the absolute majority of the Far East plaque bracelets (Kon'kova, p.81, tab.3), and two out of four investigated plaque bracelets from the Volga Bulgaria (Khlebnikova, 1996, p.270, 274-277, tab.I, III-IV).

Pins (NN 138-139) of syul'gamas (one of them has an iron bow) are characterised by the following composition: copper – from 98.65% to 98.85%, tin – from 0.3% to 0.4%, lead – from 0.2% to 0.5%, zinc – not found, arsenic – from 0.07% to 0.2%, antimony – from 0.04% to 0.2%.

A numerous enough group (35 articles) is constituted by bronze mirrors (NN 5, 12, 15-39, 79, 83-84, 92, 96, 100-101, 140). Their composition is to a large extent determined by the technological demands (the mirror casting demands a well flowing, lowly porous alloy, and the ready articles should have "mirror" lustre). The quantity of copper in them fluctuates from 61.28% to 87.77%, tin - from 10% to 35%, lead - from 0.2% to 9%. There is not more than 2.7% zinc in the articles, arsenic – to 1.3%, antimony - from 0.02% to 3.3%, iron - not more than 0.8%, nickel - not more than 0.1%, cobalt - not more than 0.02%. Comparing these data with the information of the chemical composition of mirrors from Minusinsk hollow, for which the dating of the XIIIth – XIVth centuries is probable (Lubo-Lesnichenko, 1975, p.142-149), as well as with alloys of mirrors of the XIIth – XIIIth centuries from Russian Far East (Kon'kova, p.79, tab.3), we can note the lower quantity of tin in South Siberian and Far East articles - from 0.02% to 20%. The mirrors investigated by us reveal, as a whole, a very close similarity with the articles found on the territory of the Volga Bulgaria (Polyakova, 1983, p.345; Khlebnikova, 1996, p.270, 274-276, tab.I, III-IV), which speaks of the production of both of these groups in the Golden Horde Volga region.

[166] AKU N AKU-2/192.

Table 4. Results of quantitative spectral analyses of non-ferrous articles from the Golden Horde settlements of Saratov region.

Laboratory number	Article	Register N	Cu	Sn	Pb	Zn	Bi	Sb	As	Ag	Ni	Co	Fe	Mn	Au	Weight	Illustration
726-13	key	1	99.61	0	0.02	0	0	0.08	0	0.05	0.2	0.02	0.02	0			
723-11	thimble	3	89.26	1.4	0.6	8.5	0	0.06	0.1	0.04	0.01	0	0.03	0		9.5	
716-11	plaque	4	99.04	0.1	0.7	0	0	0.1	0	0.03	0	0	0.03	0		6	
716-12	mirror	5	80.32	19	0.3	0	0	0.2	0	0.1	0.03	0	0.05	0			
723-12	earring	6	98.42	0.1	1.1	0	0	0.08	0.2	0.06	0.02	0	0.02	0		4.5	
723-13	'knuckle-bone'	7	72.92	9.7	6.6	0.3	0	0.6	0.5	0.2	0.08	0	9.1	0			
716-13	rivet	8	99.9	0	0	0	0	0	0	0.1	0	0	0	0		7	fig.49,*12*
716-14	cast vessel	9	73.76	7.7	11	6	0	0.3	1	0.02	0.02	0	0.2	0		Cu_20	fig.49,*19*
716-15	cast vessel	10	83.24	4.9	0.7	10	0	0.02	0.6	0.1	0.04	0.1	0.3	0		Cu_20	
716-16	bracelet	11	87.36	4.3	0.9	6.9	0	0.1	0	0.03	0.01	0.1	0.3	0		8	fig.35,*31*
723-14	mirror	12	66.97	31	1.3	0	0	0.2	0.1	0.4	0.02	0	0.01	0			type A8
716-17	plate	13	85.9	14	0	0	0	0	0	0.02	0.03	0.03	0.02	0		7.5	
723-15	bracelet	14	97.46	0.2	1	0	0	0.4	0.5	0.1	0.04	0	0.3	0			fig.35,*24*
716-18	mirror	15	84.86	12	2	0.8	0	0.2	0	0.04	0.04	0	0.06	0		5	type A8, fig.37,*10*
716-19	mirror	16	87.77	10	0.7	0	0	0.2	1.2	0.07	0.03	0.01	0.02	0		6	type A1, fig.9,*1*
716-20	mirror	17	82.66	14	2	0	0	0.2	1	0.08	0.02	0	0.04	0		5	type A5
723-16	mirror	18	78.45	21	0.2	0	0	0.1	0.2	0.04	0.01	0	0	0			type A1, fig.9,*2*
716-21	mirror	19	78.53	18	2.4	0	0	0.3	0.6	0.1	0.03	0	0.04	0			type A3
716-22	mirror	20	79.24	19	0.9	0	0	0.1	0.5	0.2	0.02	0	0.04	0			type D1, fig.40,*8*
723-17	mirror	21	61.28	35	2.6	0	0	0.5	0.2	0.2	0.02	0	0.2	0			type C2, fig.40,*6*
716-23	mirror	22	79.28	16	3.8	0	0	0.2	0.3	0.2	0.02	0	0.2	0			type A3
716-24	mirror	23	73.86	17	4.4	2.7	0	0.2	1	0.08	0.05	0.01	0.7	0			type A2, fig.37,*3*
716-25	mirror	24	74.17	17	7.5	0.1	0	0.3	0.8	0.1	0.03	0	0	0			type A5
716-26	mirror	25	71.08	23	3.8	0.2	0	0.3	0.5	0.3	0.02	0	0.8	0			type C1, fig.40,*5*
716-27	mirror	26	79.99	15	3.8	0	0	0.09	0.8	0.2	0.02	0	0.1	0			type A3
716-28	mirror	27	77.48	18	3.2	0.3	0	0.05	0.7	0.05	0.02	0	0.2	0			type A8
716-29	mirror	28	73.43	24	0.9	0.3	0	0.2	1	0.04	0.06	0	0.07	0		8	type A2
716-30	mirror	29	66.95	22	8.3	0.5	0	0.7	1.3	0.1	0.1	0.02	0.03	0		9	type D2, fig.40,*10*
716-31	mirror	30	84.47	15	0.4	0	0	0.08	0	0.03	0.02	0	0	0			type E1
716-32	mirror	31	83.02	15	1.8	0	0	0.09	0	0.07	0.02	0	0	0			type A9
716-33	mirror	32	76.06	23	0.8	0	0	0.06	0	0.06	0.02	0	0	0		6.5	type B1, fig.39,*4*
716-34	mirror	33	82.56	16	1.3	0	0	0.03	0	0.09	0	0	0.02	0			type E1
716-35	mirror	34	70.28	28	1.5	0	0	0.09	0	0.1	0.01	0	0.02	0			type D5, fig.40,*7*
716-36	mirror	35	83.24	15	1.6	0	0	0.02	0	0.03	0.1	0.01	0	0			fig.40,*13*
716-37	mirror	36	79.26	20	0.4	0	0	0.2	0	0.1	0.03	0	0.01	0			type B4, fig.39,*7*
716-38	mirror	37	78.77	19	1.6	0.4	0	0.1	0	0.06	0.03	0	0.04	0		7.5	type B6
716-39	mirror	38	77.14	18	2.9	0.9	0	0.06	0.7	0.05	0.03	0.02	0.2	0			type A2
716-40	mirror	39	79.44	19	1.2	0	0	0.2	0	0.1	0.02	0	0.04	0			type B1, fig.39,*2*
716-41	cast vessel	40	81.91	18	0	0	0	0.01	0	0.01	0.02	0.03	0.02	0			fig.49,*15*
716-42	lid of vessel	41	99.03	0.5	0.3	0	0	0.06	0	0.1	0.01	0	0	0			fig.49,*18*
716-43	lid of vessel	42	97.81	1.7	0.3	0	0	0.1	0	0.06	0	0	0.03	0		6.5	fig.49,*17*
716-44	cup of weights	43	97.7	0.7	0.4	0.1	0	0.08	0.9	0.03	0.02	0.02	0.05	0		9	fig.58,*27*
716-45	incensory	44	74.09	20	2	0.4	0	2.4	0.9	0.1	0.02	0	0.09	0		5.5	fig.82,B,*23*
716-46	ingot	45	99.48	0.3	0.2	0	0	0	0	0.02	0	0	0	0			
723-18	vessel?	46	70.9	9.4	14	3.8	0	0.8	0.4	0.4	0.08	0.02	0.2	0		8.5	
716-47	band	47	99.21	0	0.5	0	0	0.2	0	0.08	0.01	0	0	0			
723-19	lock	48	86.42	11	1.3	0	0	0.9	0.2	0.08	0.04	0	0.06	0			fig.56,*4*
723-20	lock	49	79.4	19	1	0	0	0.07	0.1	0.4	0.01	0.01	0.01	0			fig.56,*5*

Table 4. Continued.

Laboratory number	Article	Register N	Cu	Sn	Pb	Zn	Bi	Sb	As	Ag	Ni	Co	Fe	Mn	Au	Weight	Illustration
723-21	lock	50	73.93	15	9.7	0	0	0.2	0.1	1	0.04	0	0.03	0			fig.56,*7*
723-22	lock	51	88.94	8.7	2	0	0	0.03	0.1	0.2	0.01	0	0.02	0			fig.56,*6*
723-23	lock	52	82.86	11	5.5	0.1	0	0.3	0.1	0.1	0.02	0	0.02	0			fig.56,*8*
723-24	facing	53	80.99	11	7	0.1	0	0.1	0.1	0.1	0.01	0	0.6	0		9	fig.57,*10*
723-25	plate	54	68.75	0.2	6.5	24	0	0.04	0	0.1	0.01	0	0.4	0			fig.57,*12*
716-48	article	55	84.03	12	3.2	0.3	0	0.3	0	0.1	0.03	0.01	0.03	0			fg.57,*13*
716-49	bracket	56	74.27	2.2	0.4	23	0	0	0	0.03	0.05	0	0.05	0		6	fig.34,*21*
723-26	bracket	57	82.83	15	0.8	0	0	0.4	0.3	0.6	0.06	0	0.01	0			fig.34,*3*
726-12	bracket	58	66.89	0	15	18	0	0.01	0	0.02	0.04	0	0.04	0			
716-50	bell	59	97.07	1	0.8	0	0	0.1	0	1	0.01	0	0.02	0			fig.58,*4*
723-28	kolt	60	86.67	12	0.5	0	0	0.2	0.5	0.09	0.02	0	0.02	0			fig.35,*12*
716-51	eye of vessel	61	98.9	0	0.8	0	0	0.2	0	0.08	0.02	0	0	0		5	
716-52	bracelet	62	88.95	2.2	1.1	7.4	0	0	0	0.1	0.01	0.04	0.2	0			fig.35,*30*
716-53	fingering	63	17	0.3	3	0	0	0	0	79.7	0	0	0	0	+	7	fig.35,*15*
716-54	bracelet	64	86.74	10	0.6	1.2	0	0.04	0.6	0.7	0.02	0.04	0.06	0		8	fig.35,*28*
723-29	eye of vessel	65	77.21	4.5	7.1	10	0	0.2	0.4	0.3	0.07	0.02	0.2	0			fig.49,*13*
717-11	bell	66	88.52	9.4	1.2	0	0	0.1	0	0.05	0.04	0.09	0.6	0		Cu_20	fig.58,*3*
717-12	belt ring	67	87.58	8.2	2.3	1.2	0	0.2	0	0.3	0.02	0	0.2	0			fig.33,*7*
724-12	belt ring	68	70.36	1	0.4	28	0	0.08	0.1	0	0.02	0	0.04	0		5	fig.33,*11*
717-13	bracelet	69	98.86	0	0.4	0	0	0.4	0	0.3	0.03	0	0.01	0		7.5	fig.35,*25*
723-31	belt ring	70	66.42	13	10	10	0	0.1	0.2	0.08	0	0	0.2	0			fig.33,*8*
723-32	belt ring	71	55.47	25	17	1.7	0	0.2	0	0.5	0.04	0	0.09	0			fig.33,*9*
723-33	key	72	62.15	31	5.5	0	0	0.6	0.1	0.5	0.1	0	0.05	0			fig.57,*5*
723-34	article	73	80.78	13	3.2	2.1	0	0.04	0.2	0.08	0.3	0	0.3	0			fig.58,*11*
717-14	plug	74	79.97	7.7	3	8.7	0	0.2	0	0.2	0.03	0	0.2	0			
723-35	bracket	75	88.02	4.1	2.2	4.2	0	0.05	0.1	0.2	0.03	0	1.1	0			fig.34,*5*
723-36	belt ring	76	82.18	15	1.6	0.5	0	0.05	0.1	0.5	0.02	0	0.05	0			fig.33,*10*
723-37	fastener	77	67.66	18	9	3.6	0	0.1	0.2	0.2	0.04	0	1.2	0			fig.58,*20*
723-38	bracelet	78	80.03	7.5	3.2	8	0	0.4	0.1	0.3	0.4	0	0.07	0			
717-15	mirror	79	86.47	12	1.2	0	0	0.1	0	0.2	0.01	0	0.02	0			
724-13	weight	80	0	21	78.97	0	0	0.03	0	0	0	0	0	0			
717-16	weight	81	0	0.03	99.97	0	0	0	0	0	0	0	0	0			
717-17	weight	82	0	0.03	99.97	0	0	0	0	0	0	0	0	0		8	
717-18	mirror	83	71.71	18	9	0.4	0	0.3	0	0.5	0.06	0	0.03	0			
717-19	mirror	84	82.76	16	1	0	0	0.1	0	0.1	0.01	0	0.03	0		8	
723-39	vessel	85	80.75	14	4.5	0	0	0.2	0.2	0.3	0.03	0	0.02	0			
723-40	vessel	86	94.81	1.5	2.2	0	0	0.4	0.2	0.8	0.05	0	0.04	0			
723-41	vessel	87	97.29	0.7	0.9	0	0	0.4	0.1	0.5	0.01	0	0.1	0			
723-42	vessel	88	99.32	0.1	0	0	0	0.2	0.1	0.2	0.03	0	0.05	0			
723-43	bracelet	89	79.78	0	8	11	0	0.02	0.4	0.2	0.4	0	0.2	0			
723-44	knife coupling	90	77.65	15	0.8	5.5	0	0.2	0.1	0.3	0.05	0	0.4	0			
723-45	splash	91	99.1	0.1	0	0	0	0.08	0.1	0.5	0.02	0	0.1	0			
717-20	mirror	92	76.02	22	1.1	0	0	0.5	0	0.3	0.06	0	0.02	0			
723-46	vessel	93	99.08	0	0	0	0	0.1	0	0.7	0.05	0	0.07	0			
723-47	scrap	94	98.13	0.06	0.7	0	0	0.09	0.1	0.8	0.02	0	0.1	0			
717-21	scrap	95	98.95	0.1	0.4	0	0	0.4	0	0.1	0.05	0	0	0		9	
717-22	mirror	96	80.76	18	0.8	0	0	0.2	0	0.2	0.03	0	0.01	0			
717-23	vessel	97	98.63	0.3	0.4	0	0	0.4	0	0.2	0.05	0	0.02	0		9	
723-48	facing	98	99.16	0.02	0.4	0	0	0.06	0.1	0.2	0.01	0	0.05	0			
723-49	thimble	99	95.85	0.02	0.7	3	0	0.03	0.2	0.1	0.05	0	0.05	0		4	
717-24	mirror	100	78.69	16	0.2	0	1.1	3.3	0	0.7	0.01	0	0	0			
717-25	mirror	101	82.91	16	0.6	0	0	0.2	0	0.2	0.01	0	0.08	0			

Table 4. Continued.

Laboratory number	Article	Register N	Cu	Sn	Pb	Zn	Bi	Sb	As	Ag	Ni	Co	Fe	Mn	Au	Weight	Illustration
723-50	bracket	102	90.65	7.5	1.6	0.1	0	0.05	0	0.07	0	0	0.03	0			
723-51	belt tip	103	63.77	16	18	1.4	0	0.08	0.2	0.2	0.05	0	0.3	0			
723-52	fingering	104	74.37	5.7	18	1.1	0	0.2	0.3	0.2	0.03	0	0.1	0			
723-53	bead?	105	99.09	0.02	0.4	0	0	0.2	0	0.2	0.06	0	0.03	0			
723-54	bell?	106	94.51	0.01	0.6	4.8	0	0.01	0	0.02	0	0	0.05	0		6	
724-14	cast vessel	107	72.96	26	0.2	0	0	0.04	0.2	0.06	0.1	0.04	0.4	0			
724-15	cast vessel	108	77.56	22	0.1	0	0	0.02	0.1	0.03	0.06	0.03	0.1	0			
717-27	rivet	109	99.31	0.03	0.2	0.03	0	0.2	0	0.2	0.02	0	0.01	0			
717-28	rivet	110	99.44	0.03	0.1	0	0	0.3	0	0.09	0.01	0	0.03	0		7	
724-16	rivet	111	88.23	11	0.2	0	0	0.3	0.1	0.1	0.03	0	0.04	0			
724-17	vessel	112	98.71	0.2	0.5	0	0	0.2	0.1	0.2	0.02	0	0.07	0			
724-18	vessel	113	98.96	0	0.4	0	0	0.3	0.2	0.1	0.02	0	0.02	0			
724-19	band	114	98.67	0.4	0.3	0	0	0.2	0.1	0.3	0.02	0	0.01	0			
724-20	vessel	115	98.63	0.1	0.4	0	0	0.4	0.2	0.2	0.07	0	0	0			
717-29	vessel	116	99.15	0.03	0.4	0	0	0.3	0	0.1	0.01	0	0.01	0		Cu_20	
724-21	knife coupling	117	78.81	0.8	0	20	0	0.06	0.2	0.02	0.01	0	0.1	0		5	
724-22	knife coupling	118	99.62	0	0	0	0	0.1	0.2	0.05	0.02	0	0.01	0			
724-23	knife coupling	119	99.85	0	0	0	0	0.04	0	0.06	0.02	0	0.03	0			
724-24	knife coupling	120	99.41	0	0	0	0	0.1	0.4	0.04	0.03	0	0.02	0			
717-30	knife coupling	121	84.79	5	0.6	8.3	0	0	0	0.2	0.01	0	1.1	0			
724-25	knife coupling	122	80.02	2	0.6	17	0	0.06	0.2	0.05	0.03	0	0.04	0			
724-26	fragment of a wire	123	99.73	0	0	0	0	0.04	0.2	0.01	0.01	0	0.01	0			
717-31	weight	124	0	0.03	99.76	0	0	0.2	0	0	0.01	0	0	0			
717-32	weight	125	0	0.02	99.98	0	0	0	0	0	0	0	0	0			
717-33	weight	126	0	0.02	99.98	0	0	0	0	0	0	0	0	0			
717-34	weight	127	0	0.04	99.76	0	0	0.2	0	0	0	0	0	0			
717-35	weight	128	0	0.03	99.97	0	0	0	0	0	0	0	0	0			
724-27	weight	129	0	0	99.98	0	0	0.02	0	0	0	0	0	0			
724-28	weight	130	0	0	99.97	0	0	0.02	0	0.01	0	0	0	0			
717-36	weight	131	0	46	53.82	0	0	0.09	0	0.05	0	0	0.04	0		9	
724-29	weight	132	0	20	79.94	0	0	0.04	0	0.02	0	0	0	0			
717-37	weight?	133	0	33	66.86	0	0	0.08	0	0.01	0	0	0.05	0			
724-30	ingot	134	0	0.6	99.36	0	0	0.02	0	0	0	0	0.02	0			
730-12	vessel	135	98.98	0.2	0.2	0	0.04	0.3	0.1	0.1	0.05	0	0.01	0.02			
730-13	ingot	136	99.55	0	0.1	0	0.04	0	0.08	0.2	0.01	0	0	0.02			
730-14	vessel	137	97.9	1.3	0.2	0	0.03	0.3	0.1	0.1	0	0	0.06	0.01		Cu_20	
730-15	syul'gama	138	98.85	0.3	0.2	0	0.04	0.2	0.2	0.09	0.02	0	0.08	0.02		8	
730-16	syul'gama	139	98.65	0.4	0.5	0	0.02	0.04	0.07	0.1	0	0	0.2	0.02			
730-17	mirror	140	66.12	33	0.4	0	0.06	0.2	0.09	0.08	0.01	0	0.02	0.02			
730-18	vessel	141	98.89	0.3	0.4	0	0.02	0.06	0.06	0.2	0.01	0	0.04	0.02			
730-19	bell	142	89.04	0.5	0.1	9.6	0	0.03	0.09	0.3	0.01	0	0.3	0.03		7.5	
730-20	knife coupling	143	67.82	28	0.4	3	0.04	0.02	0.2	0.06	0.04	0	0.4	0.02		5	
730-21	knife coupling?	144	97.11	0.2	2.2	0	0.05	0.2	0.1	0.05	0.04	0	0.03	0.02			
730-22	facing of handle	145	90.49	0.3	1.8	6.1	0	0.2	0.5	0.4	0	0.1	0.1	0.01			
730-23	facing of hone	146	92.27	0.06	0.8	6	0	0.04	0	0.3	0.4	0	0.09	0.04		7.5	
730-24	article	147	79.61	17	2.2	0	0.03	0.6	0.2	0.2	0.04	0	0.1	0.02			
730-25	article	148	84.35	0.4	4.4	10	0.03	0.2	0.1	0.3	0	0	0.2	0.02			
730-26	weight	149	0	0	99.98	0	0	0.01	0	0.01	0	0	0	0			
730-27	weight	150	0	63.75	36	0	0	0.03	0	0.2	0	0	0.02	0			

The comparison of the chemical composition of different groups of the investigated mirrors, typologically distinguished by us earlier, is supposed to be quite interesting. In general, mirrors with the different shape of border has at least identical composition, that attest about manufacture of the majority of them by the Golden Horde craftsmen.

Articles with a narrow high border (NN 12, 15-19, 22-24, 26-28, 31, 38, 79, 83, 140) have the following composition: copper – from 66.12% to 87.77%, tin – from 10% to 33%, lead – from 0.2% to 9%, zinc – not more than 2.7%, arsenic – not more than 1.2%, antimony – from 0.05% to 0.3%, iron - not more than 0.7%, nickel - from 0.01% to 0.06%, cobalt - not more than 0.02%. The Minusinsk mirrors with the similar border contain up to 91% of copper and not more than 9% of tin (Lubo-Lesnichenko, 1975, p.142-149), which from our point of view speaks of the different composition of the alloy and, consequently, of different centres of production of morphologically close articles, which were found in the Saratov Volga region and in the South Siberia. In our selection of the mirrors there three items with floral ornament of blossoming buttons, "growing" in turn from the edge and from the centre of the article (NN 23, 28, 38); two similar mirrors from the Volga Bulgaria contain less copper and arsenic and more lead (Polyakova, 1983, p.345; Khlebnikova, 1996, p.274-276, tab.III-IV,*17,20*). This fact can be explained by production of mirrors of the same type in different workshops of the Golden Horde according to different recipes of alloys and on the basis of different sources of metal.

Mirrors with a wide massive border (NN 32, 35-37, 39) are characterised by the following composition: copper – from 76.06% to 83.24%, tin – from 15% to 23%, lead – from 0.4% to 1.6%, zinc – not more than 0.4%, arsenic – not found, antimony – from 0.02% to 0.2%, iron - not more than 0.04%, nickel - from 0.02% to 0.1%, cobalt - not more than 0.01%. The given composition is, as a whole, close to the alloys of synchronic mirrors of Minusinsk hollow with the same shape of the border (Lubo-Lesnichenko, 1975, p.138, 142-149). Interesting is the fact that the composition of the articles with the image of two fishes swimming one after another (NN 32, 39) differs from the composition of typologically close mirrors from South Siberia (Lubo-Lesnichenko, 1975, p.142-147, NN 138-142, 144), where the quantity of copper is 83-90%, tin - 4-6%, lead - 4-11%, and there is always a micro alloy of zinc. This fact allows to speak doubtlessly of the production of articles N 32 and N 39 (typologically having doubtless Far East sources) by not Chinese or Central Asian masters, but by Golden Horde craftsmen, and, most probably, from the raw materials not originating from the Far East.

Mirrors with a low rim-like or under-triangular border, as well as without an expressed border (NN 5, 20-21, 25, 29-30, 33-34, 84, 92, 96, 100-101) have the composition: copper – from 61.28% to 84.47%, tin – from 15% to 35%, lead – from 0.2% to 8.3%, zinc – not more than 0.5%, arsenic - not more than 1.3%, antimony – from 0.03% to 3.3%, iron - not more than 0.8%, nickel - not more than 0.1%, cobalt - not more than 0.02%. In one of the articles (N 100) a significant alloy of bismuth is found - 1.1%; such a significant alloy of bismuth (from 0.5% to 1%) is characteristic only for mirrors found in the Volga Bulgaria (Khlebnikova, 1996, p.276, tab.IV).

Cast plates (NN 54-55) are represented by the following composition: copper – from 68.75% to 84.03%, tin – from 0.2% to 12%, lead – from 3.2% to 6.5%, zinc – from 0.3% to 24%, arsenic – not found, antimony – from 0.04% to 0.3%. One of the plates (N 13) from tin bronze with insignificant alloys dates back probably to the early Iron Age.

Copper forged vessels (NN 85-88, 93, 97, 112-113, 115-116, 135, 137, 141), their eyes (NN 61, 65), rivets (NN 8, 109-111) and lids (NN 41-42) have the composition: copper – from 77.21% to 99.9%, tin – not more than 14%, lead - not more than 7.1%, zinc - not more than 10%, arsenic - not more than 0.4%, antimony - not more than 0.4%. Similar composition have four quantitatively analysed fragments of forged vessels from the Volga Bulgaria (Polyakova, 1983, p.345; Khlebnikova, 1996, p.273-277, tab.II-IV) and, probably, vessels from Pskov (Koroleva, 2000, p.129). As a rule, the given group is represented by "pure" copper, like all analysed items from Novgorod (Konovalov, 1974, p.152); in other cases we can suggest the usage of the non-ferrous waste materials in their production. It is interesting to compare the composition of our selection of articles with the composition of forged inlaid Middle East vessels of the middle of the XIIIth – middle of the XIVth century (Atil, Chase, Jett, p.134-135, 160, 165, 170): having the same or a little lower content of copper, the Middle East vessels contain less than 1.5% of tin, less than 3% of lead and from 12.8% to 27% of zinc, i.e. have a completely different composition.

Cast bronze vessels (NN 9-10, 40, 46, 107-108) appeared to be of the following composition: copper – from 70.9% to 83.24%, tin – from 4.9% to 26%, lead – not more than 14%, zinc - not more than 10%, arsenic - not more than 1%, antimony – from 0.01% to 0.8%. Cast vessel of the Far East have the similar composition (Kon'kova, p.80, tab.3).

The investigated cast halves of bronze locks in the shape of animals (NN 48-52) had the following composition: copper – from 73.93% to 88.94%, tin – from 8.7% to 19%, lead – from 1% to 9.7%, zinc – not more than 0.1%, arsenic – from 0.1% to 0.2%, antimony – from 0.03% to 0.9%. Close composition had alloys of analysed similar articles in the shape of horses from the Bolgarskoe and Selitrennoe sites of ancient cities (Polyakova, 1983, p.346; Khlebnikova, 1996, p.275-276, Table.III-IV,*25-26*). Two investigated bronze keys appeared to be made of: the forged one – of "pure" copper (N 1), the cast one – of tin bronze (N 72).

The cast Old Russian articles - incensory (N 44) and kolt (N 60) showed the following percentage of main elements: copper – from 74.09% to 86.67%, tin – from 12% to 20%, lead – from 0.5% to 2%, zinc – not more than 0.4%, arsenic – from 0.5% to 0.9%, antimony – from 0.2% to 2.4%. It is of interest that in the alloy, of which the incensory was cast, was added antimony, like in the Novgorod samples of church utensils of the XIIIth – XVth centuries (Konovalov, 1974, p.153).

The analysed bells (NN 59, 66, 106, 142) showed the

composition: copper – from 88.52% to 97.07%, tin – from 0.01% to 9.4%, lead – from 0.1% to 1.2%, zinc – not more than 9.6%, arsenic – not more than 0.09%, antimony – from 0.01% to 0.1%. One of the bells (N 66) was made of two cast halves (which explains the large quantity of tin and lead), while three others were forged. Similar composition has the analysed round bell from the Bolgarskoe site of ancient city (Khlebnikova, 1996, p.270, tab.I).

We also investigated two thimbles (NN 3, 99) of the following composition: copper – from 89.26% to 95.85%, tin – from 0.02% to 1.4%, lead – from 0.6% to 0.7%, zinc – from 3% to 8.5%, arsenic – from 0.1% to 0.2%, antimony – from 0.03% to 0.06%.

Knife couplings (NN 90, 117-122, 143-144) and facing of handle (N 145) are represented by articles of "pure" copper (NN 118-120) and complex alloys (NN 90, 117, 121-122, 143-145), as a rule with large quantity of zinc: copper – from 67.82% to 97.11%, tin – from 0.2% to 28%, lead – not more than 2.2%, zinc – up to 20%, arsenic – not more than 0.5%, antimony – not more than 0.2%. Two analysed couplings of knives from the Volga Bulgaria (Polyakova, 1983, p.345; Khlebnikova, 1996, p.270, 273, tab.I,*1*, II,*32*) were also made of "pure" copper and complex alloy, similar to the metal of the investigated articles (NN 90, 117, 121-122).

Among the single investigated cast articles there are: a earring (N 6), imitation of the knucklebone of ram (N 7), a bag facing (N 53), an article with a figure of a bird (N 73), a plug with a loop (N 74), a fastener of fetters (N 77), a facing of hone (N 146) and an uncertain objects (NN 147-148). Their composition is: copper – from 67.66% to 98.42%, tin – from 0.06% to 18%, lead – from 0.8% to 9%, zinc – not more than 10%, arsenic – not more than 0.5%, antimony – from 0.04% to 0.6%.

The forged cup of weights (N 43), facing (N 98) and a bead (N 105) are composed of "pure" copper. The analysed cup of weights from the Bolgarskoe site of ancient city appeared to be brass (Khlebnikova, 1996, p.275, 277, tab.III-IV).

The investigated plaque (N 4), bands (NN 47, 114) of non-ferrous metal, scraps (NN 94-95), a fragment of a wire (N 123), an ingots (NN 45, 136) and a splash of metal (N 91) had composition: copper – from 98.13% to 99.73%, tin – not more than 0.4%, lead – not more than 0.7%, zinc – not found, arsenic – not more than 0.2%, antimony – not more than 0.4%. Thus we can assert that the investigated by us samples of raw materials and wastes of craft production are represented by practically 'pure' copper, like the majority of synchronic production wastes of Novgorod (Konovalov, 1974, p.166-168).

The investigated weights (NN 80-82, 124-133, 149-150) and a small ingot (N 134) have the composition: tin – not more than 63.75% (ware on the tin basis is only one - N 150), lead – from 36% to 99.98%, antimony – not more than 0.2%.

It is notable that from 132 investigated samples on copper basis 120 articles do not have a tinge of bismuth (90.9%), 79 articles - of zinc (59.9%), 15 articles - of iron (11.4%), all articles – of gold. In synchronic articles of copper alloys from Novgorod these elements, except iron, are present in different proportions (Konovalov, 1974, p.38-39). The large quantity of iron in some samples should also be noted (NN 7, 75, 77), which can probably be explained by the usage of copper-pyrites ores, rich in this element (Konovalov, 1969, p.205; Konovalov, 1974, p.43).

We consider it interesting to compare the quantity of our articles according to the types of alloys distinguished by A.A.Konovalov[167], with the Novgorod materials of the XIIIth – XIVth centuries (Konovalov, 1974, p.52, 54-55, fig.6): our materials contain far less articles made of lead-tin bronzes (6.1%) and far more articles of tin bronzes (43.2%; the prevalence of this group is explained by the fact that it includes the majority of the investigated bronze mirrors, completely uncharacteristic of Old Rus); there are a bit fewer brass articles in our selection (3.4%), there are more articles of complex alloys (copper, tin, zinc and lead - 20.3%) and "pure" lead (7.4%). In the materials of Pskov of the XIIIth - XIVth centuries, in comparison with ours, there are much fewer articles of "pure" copper, but far more (even in comparison with Novgorod materials) articles of brass and complex alloys (Koroleva, 1997, p.174-176). These data allow to suggest the opportunity of import of brass into the territory of the Golden Horde, like of Rus, from Western Europe via Baltic region.

§ 2.5. Fishing implements from Ukek and its regions

In this paragraph fishing hooks, boat cramp and loads of the Golden Horde time, found in the central areas of the Saratov region are analysed. All wares given on illustrations are the occasional finds.

Fishing hooks are presented by two types. Both types have devices for fastening a hook in the form of 'a spade' - the flattened ending; such hooks as a rule can be identified as an equipment of fishing-nets.

Type 1 (9 items). Rectangular in section with a well-defined sting (fig.65,*1-3*). Six wares with the distinguished sting, but two of them roundish in section, occur from the settlement at the village Podgornoe in the regions of Ukek (Kasankin, 1994, p.95, 100, fig.2,*5-6*; Kasankin, 1997-1, p.235, 237, fig.2,*4*; Lopatin V.A. Arkheologicheskie issledovaniya v Saratovskom

[167] According to the classification of this author, available in his PhD thesis, our materials could be referred to the following groups: I - 'pure' copper, 24 items (NN 1, 4, 6, 8, 47, 61, 69, 88, 91, 93-95, 98, 105, 109-110, 113, 115-116, 118-120, 123, 136), II - lead-tin bronzes, 9 items (NN 14, 86-87, 97, 112, 135, 139, 141, 144), III - tin bronzes, 64 items (NN 5, 7, 12-13, 15-22, 24-45, 48-53, 55, 57, 59-60, 66, 72, 76, 79, 83-85, 92, 96, 100-102, 107-108, 111, 114, 137-138, 140, 147), IV - brass, 5 items (NN 58, 89, 99, 106, 146), V - complex alloy with the prevalence of zinc over tin, 17 items (NN 3, 10-11, 54, 56, 62, 65, 68, 74-75, 78, 117, 121-122, 142, 145, 148), VI - complex alloy with the prevalence of tin over zinc, 13 items (NN 9, 23, 46, 64, 67, 70, 71, 73, 77, 90, 103, 104, 143), VII - 'pure' lead, 11 items (NN 81-82, 124-130, 134, 149), VIII - alloy of lead with tin, 4 items (NN 80, 131-133), X - alloy of tin with lead, 1 item (N 150). To the systematization of A.A.Konovalov from our materials could not be included only silver finger ring (N 63).

Povolzh'e v 1987 g., fig.71,*6*)[168]; one of the wares from Podgornoe, probably, served for a fishing tackle, and one more - for catching of predator 'on a small fish'. Similar wares with a well-defined sting, but sometimes roundish in section, were known in Russia from pre-Mongolian time up to the XVIth - XVIIth centuries (Gaydukov, p.91, 140, fig.49,*11*; Darkevich, Borisevich, p.148, 194, 200, 218, 237, 246, 295, 305, 334, tab.9,*4*, 18,*7*, 67,*12*, 77,*3*, 106,*8*; Mal'm, 1956, p.119, fig.4,*5*; Medvedev, 1967, p.76, 81, fig.29,*18*; Nikitin, 1971, p.41, 61, tab.5,*8*; Pryakhin, Vinnikov, Tsybin, p.27-28, fig.13,*22,27*; Pryakhin, Tsybin, p.36, 38, 41, 56, 58, 62, fig.13,*11*, 15,*16-19*, 19,*9*; Salmina, p.165, 167, 169, fig.12,*2a, 3a*; Sedov, 1961, p.99-100, fig.36,*11-13*; Sedova, 1978, p.100, 143, tab.14,*3-6,8-12*), occurred in Bulgar (Savchenkova, p.19-20, fig.4,*2*), Suvar (Khuzin, Sharifullin, p.99, fig.4,*12*), Dzhuketau (Khuzin, Nabiullin, p.94-95, 111, fig.6,*6,8*); there are finds from Vodyanskoe site of ancient city (Egorov, Poluboyarinova, p.69, 76, tab.I,*6*), from the Volga Bulgarian settlements (*Arkheologicheskie pamyatniki Tsentral'nogo Zakam'ya*, p.91, fig.9,*19-20*; Kazakov, 1993, p.120, 126, fig.4,*18-20*; Rudenko, 1994, p.126, 134, fig.4,*2*; Rudenko, 2000-1, p.105, 107, 113, fig.26,*B,24-32*, 28,*B,28-29*, 34,*A,7,9*; Rudenko, 2000-2, p.26, 69, fig.7,*4-5*; Starostin, Kazakov, p.128-129, 135, fig.2,*7-8*, 5,*3-5,8-9*) and from vicinities of Bilyarsk (*Kul'tura Bilyara*, p.28, 33-34, tab.VIII,*3-4*). Roundish in section hooks with a well-defined sting were also known in Western Europe of the XIVth - XVth centuries (Murray, Murray, p.182-183, fig.36,*108-109*).

Type 2 (11 items). Roundish in section without the distinguished sting (fig.65*,4-13*). The similar hook is known from Podgornoe settlement. Analogies are available from Old Russian monuments (Darkevich, Borisevich, p.195, 198, 297, 301, tab.69,*10*, 73,*11*; Makarov, 1994, p.163, 182, fig.7,*7*; Pryakhin, Tsybin, p.34, 38, 54, 58, fig.11,*19*, 15,*20*; Salmina, p.165, 167, 169, fig.12,*2b*; Sedov, 1961, p.99-100, fig.36,*15*; Sedova, 1978, p.100), from Bolgarskoe (Savchenkova, p.19-20, fig.4,*1*) and Bilyarskoe (*Kul'tura Bilyara*, p.28, 33-34, tab.VIII,*6-8*) sites of ancient cities, from Suvar (Khuzin, Sharifullin, p.99, fig.4,*13*), from Laishevskoe settlement (Rudenko, 2000-1, p.106-107, fig.27,*5*, 28,*27*; Starostin, Kazakov, p.129-130, 138, fig.5,*1*), from one of the Golden Horde barrows on Khopyor (Garustovich, Rakushin, Yaminov, p.200, 328, tab.XXV,*4*) and from vicinities of the village Staraya Yablonka of Khvalynsky area of the Saratov region[169].

Fishing hooks were as well found on a settlement at the village Kvasnikovka in the regions of Ukek (see § 3.1).

In the funds of SOMK there is a ware probably being a boat cramp (fig.65,*14*). The similar one was found on Boldyrevskoe settlement in the regions of Ukek. Such wares occurred in the Golden Horde Volga region (Fyodorov-Davydov, 1984, fig.98,*1-2*), in Rus in the XIIIth - XIVth centuries (Medvedev, 1968, p.34, 39, fig.8,*11-12*) and in the Western Europe in the XIIIth - XVth centuries (Murray, Murray, p.182, 184, fig.37,*124-126,135-136,138*).

Fishing loads are presented by six types. Types 1, 3 and 4, probably, served for equipment of small movable nets. Twenty one of the available wares (fig.66,*1-13,16*) are ceramic of brown (fig.66,*1-11,13,16*) or grey (fig.66,*12*) colours with an impurity of sand in the sherd[170], and three are stone (fig.66,*14*). The firing of the majority of ceramic objects (fig.66,*2-10,13,16*) is good, but there are also samples of bad firing (fig.66,*1,11-12*). The loads found on the Uvek site of ancient city are repeatedly mentioned in the documents of the SUAK (See §2.6).

Type 1 (4 items). Spherical (fig.66,*1-3,16*). Analogies are known in Rus (Gussakovsky, p.104, fig.36,*21-22*; Medvedev, 1967, p.75, 80, fig.26,*30*; Pryakhin, Vinnikov, Tsybin, p.16, 20, 27, 29, fig.7,*12*, 13,*31-33*; Pryakhin, Tsybin, p.32, 51, fig.8,*15*; Salmina, p.155, fig.3,*1*; Sedov, 1961, p.99, 101, fig.37,*5,7*; Tropin, 1993, p.209-210, fig.1,*14*; Khokhlov, Nesterova, p.163, 166, fig.6) and in the Volga region (Fyodorov-Davydov, 2001, p.188, tab.99,*7*)[171].

Type 2 (1 item). Disk-shaped small with a small aperture at the edge (fig.66,*4*). It is possible to assume, that the similar subject served as a load of a fishing tackle. A more sizeable analogy is known from Beloozero (Mal'm, 1956, p.122, fig.6,*2*).

Type 3 (4 items). Under-cylinder (fig.66,*5*). Two wares were found at excavations of pits on Podgornoe settlement, one - on a settlement in site 'Podstepnoe' (Barinov, 1997-2, p.244, fig.2,*7*) in the regions of Ukek. Analogies are available in Old Rus (Vinnikov, Sinyuk, Tsybin, p.132, 137, fig.3,*11*; Darkevich, Borisevich, p.221, 302, 332, tab.74,*9*, 104,*6*; Pryakhin, Tsybin, p.32, 35-36, 51, 56, fig.8,*16*, 13,*14*; Rozenfel'dt, 1974, p.185, 187, fig.2,*2-3*; Salmina, p.155, fig.3,*4*; Sedov, 1961, p.99, 101, fig.37,*4,6*; Serkin, p.40, 59, fig.12,*20-23*; Tropin, 1993, p.213, 216, fig.4,*6*) and the Volga Bulgaria (Rudenko, 2000-2, p.21, 63, fig.1,*3*; Tallgren, 1916, tab.X,*25*).

Type 4 (10 items). Truncated-two-cone or under-oval in longitudinal section (fig.66,*6-8*). Four loads were found on settlement Podgornoe (Kasankin, 1994, p.95, 100, fig.2,*8*), two - on a settlement 'Plotina' (Barinov D.G. Otchet ob arkheologicheskikh rabotakh v basseyne r. Volgi s pritokami v predelakh Engel'sskogo rayona v 1986 godu, p.4), and one - on Alekseevskoe fortress (Kocherzhenko O.V. Otchet ob arkheologicheskikh raskopkakh Alekseevskogo gorodishcha (Saratovskaya oblast') v 1992 godu, p.8, 71, fig.40) in the regions of Ukek. Analogies are available from Old Russian monuments (Belen'kaya, Dubynin, p.112, fig.39,*7*; Gussakovsky, p.104, fig.36,*19-20*; Darkevich, Borisevich, p.144, 221, 229, 332, 428, 435, tab.1,*6*, 104,*5*, 151,*7*; Makushnikov, p.167, 185, fig.6,*11*; Mal'm, 1956, p.122, fig.6,*4*; Medvedev, 1967, p.75, 80, fig.26,*29,31*; Medvedev,

[168] The author thanks S.I.Chetverikov for giving of the information on all unpublished objects of fishing stock mentioned in the given work from the settlements Podgornoe and Boldyrevskoe; materials of trenches of 1991-1992 at the settlement Podgornoe are dated by finds of Jochid puls of the 1330-s – 1360-s.

[169] SOMK N 52020/A-2306 (AO 1250).

[170] In one case (fig.66,*4*) fixed an impurity of grog.

[171] NMRT N 5369-3, inventory N 5596.

Table 5. Objects of fishing stock from Ukek and its regions.

Settlement	hooks	loads	boat cramps
Uvek site of ancient city	13 items, 2 types	15 items, 6 types	1 item, 1 type
Podgornoe	7 items, 2 types	7 items, 3 types	-
'Plotina'	-	2 items, 1 type	-
Kvasnikovka	2 items (?)	-	-
Alekseevskoe hillfort	-	1 item, 1 type	-
Hmelevskoe I	-	1 item, 1 type	-
'Podstepnoe'	-	1 item, 1 type	-
Boldyrevskoe	-	-	1 item, 1 type

1968, p.33-34, fig.8,*15-17*; Pryakhin, Vinnikov, Tsybin, p.12-13, 27, 29, fig.5,*17*, 13,*30*; Pryakhin, Tsybin, p.32, 34-36, 51, 54, 56, fig.8,*14*, 11,*20-21*, 13,*12-13*; Rozenfel'dt, 1974, p.185, 187, fig.2,*1*; Salmina, p.155, fig.3,*2-3*; Sedov, 1961, p.99, 101, fig.37,*8*; Sedova, 1978, p.100-101, 143, tab.14,*22-29*; Tropin, 1993, p.213, 216, fig.4,*5,10-11*; Khokhlov, Nesterova, p.163, 166, fig.6; Khrekov, p.105, 111, fig.3,*14-15*; Tsybin, p.40-41, fig.2,*9*; Chernetsov, Kuza, Kir'yanova, p.242, tab.90,*4*; Chernikov, p.88, 90, fig.31,*4*), from the Volga Bulgaria, both in the materials of pre-Mongolian and Golden Horde time (*Kul'tura Bilyara*, p.28, 33-34, tab.VIII,*11*; Rudenko, 2000-1, p.117, fig.38,*15-16*; Khlebnikova, 1988, p.97, 99, fig.74,*14*; Tallgren, 1916, tab.X,*23*)[172], and also from Tsarevskoe site of ancient city - from trench IV-1964 dated by coins of the 40-s - the beginning of 80-s of the XIVth century (Fyodorov-Davydov, Vayner, Mukhamadiev, p.160, 162, tab.I,*25*).

Type 5 (2 items). Flattened under-oval with apertures at edge (fig.66,*9-10*). They are loads for large stationary nets. The ceramic load close by shape, but of a smaller size, was found in Pskov; in the same place, in Staraya Ryazan and Beloozero finds of limestone loads of the similar form (Darkevich, Borisevich, p.163, 258, tab.30,*14*; Mal'm, 1956, p.122, fig.6,*1*; Salmina, p.155-158, fig.3,*6,* 4,*1,3*) are known. The analogy from the Volga Bulgaria (Tallgren, 1916, tab.X,*15*) is known also.

Type 6 (5 items). Large disk-shaped flattened with an aperture in the centre (fig.66,*11-15*). Two of the wares are stone - from limestone (fig.66,*14-15*); one of them - with scratched marks (fig.66,*15*). Such objects served as loads for large movable nets. Similar wares from limestone are known in the layers of Pskov of the XIVth - XVth centuries (Salmina, p.156, 158, fig.4,*2*).

Type 7 (1 item). From an casual finds of 1992 from a settlement Podgornoe in the regions of Ukek occurs a disk-shaped load from sandstone with the sizes 11.5*11.5 cm. The ware has no aperture, but has traces of turning from four sides. Probably, it originally was netted with birch bark and served for the equipment of a multiwall stationary net. Similar wares are known from Novgorod and Pskov of the XIIIth - XVth centuries (Salmina, p.157, 159, fig.5,*1-3*; Chernetsov, Kuza, Kir'yanova, p.242, tab.90,*5*).

Quantitative distribution of available finds on the monuments of the Ukek regions is the following (tab.5).

[172] NMRT N 16283-22.

The objects connected to fishery are met only on 8 (15.1%) from 53 settlements known now in the regions of Ukek. Six of these settlements are situated on the Volga bank (Uvek and Alekseevskoe sites, Hmelevskoe I settlement - on the core right bank, and settlements Podgornoe, Kvasnikovka and 'Podstepnoe' - on terrace of the left bank), settlement 'Plotina' - on the bank of Saratovka, the left inflow of Volga, and Boldyrevskoe settlement - in the upper flow of the river Uvekovka.

The absence of the catching instruments of shock action - harpoons and 'harpoon' arrowheads in the available selection is remarkable. This fact does not allow to say now that this way of fishing was applied in Ukek and its regions. The amount of hooks and loads for fishing-rods is very small, which speaks about the small distribution of this way of fishing in comparison with nets, bringing much more catch. Movable net fishing was much more popular, than stationary. It is interesting also, that ceramic loads obviously quantitatively prevail above stone ones, while in the materials of Pskov the opposite, for example, is fixed (Salmina, p.155-158).

§ 2.6. The basic shapes of pottery

In this part only archaeological entire forms of ceramic vessels are taken into account. All of them are occasional finds.

Unglazed pottery is represented by much more well-preserved forms (fig.67-74, 75,*2-7*, 76-80) than glazed. All of the articles are made on pottery wheel, except one vessel of Mordvin shape (fig.75,*7*). There is glossy (fig.67,*1*, 71,*1,3-5*, 72, 73,*1,5,7,10*, 74), and non-glossy (fig.67,*2-6*, 68-70, 71,*2,6-9*, 72, 73,*2-4,6,8-9*, 75,*2-7*, 76-80) crockery; the large part of ceramic vessels (fig.67-72, 73,*1-6,8-10*, 74, 75,*2-6*, 76-80) is well fired, only two samples (fig.73,*7*, 75,*7*) have bad firing. The ceramics have brown (fig.67,*1-2,4-6*, 68-70, 71,*1-5,7-9*, 72, 73,*1-5,8-9*, 75,*2-5,7*, 76-79), red (fig.67,*3*, 71,*6*, 73,*7,10*, 74), bright-pink (fig.75,*6*) or grey (fig.67,*6*, 80) colour. On some articles (fig.67,*3-4*, 71,*2*, 72, 73,*2*) there is dark red slip. The paste of the majority of vessels has just a small impurity of sand (fig.67-70, 71,*1-7,9*, 72, 73,*1-6,8-10*, 74, 75,*2,4*, 77-80), in four cases it is complemented with organics (fig.71,*8*, 73,*7*, 75,*3,5*, 76). The fragment of amphora (fig.75,*6*) has an impurity of organics and pounded limestone, and the pot of Mordvin shape (fig.75,*7*) – of grog and fine sand.

Jar-like vessels ornamented by the drawn parallel lines

(fig.67,*1-4*; Fyodorov-Davydov, 2001, p.94, tab.49) or pit ornament, complemented with glossing as vertical lines and waves (fig.71,*5*). The last jar (fig.71,*5*; Fyodorov-Davydov, 2001, p.54, tab.27,*3*) is kept in SOMK under one number with a lid (fig.71,*4*), together with which it was probably found. One jar-like vessel from the Uvek site of ancient city is kept in the funds of GIM (fig.68-69). The analogy is known for one of the articles (fig.67,*4*) from the Bolgarskoe site of ancient city - in materials of the XIth - beginning of the XIVth century (Khlebnikova, 1988, p.60, fig.38,*4*). The vessels close to Uvek small jars (fig.67,*1-4*), are widely known from many Golden Horde monuments (Volkov, 1992-1, p.7, 20, tab.1,*B3*; Gudimenko, p.73-74, 76, fig.1,*3,5*; Mikhal'chenko, 1973, p.123, 129, fig.3,*24*; Fedorov-Davydov, 1984, p.84, fig.59,*B9-10,12*; Fyodorov-Davydov, 1984, fig.45,*9-10,12*; Fyodorov-Davydov, 2001, p.72, 74, 92, tab.40,*2*, 41,*2*, 48,*1*).

Flask-like vessel with a handle (fig.67,*5*), ornamented by a rim with two flutes. Similar pots were spread in the European part of Ulus Jochi (Mikhal'chenko, 1973, p.122-123, fig.3,*1*; Fyodorov-Davydov, 1984, fig.45,*1,3*; Fyodorov-Davydov, 2001, p.28, 69, 74, 88, tab.17,*3*, 38,*1*, 41,*1*, 47,*6*; Fedorov-Davydov, 1984, p.84, fig.59,*B1,3*).

Storage jar with handles (fig.70) have height 66 cm.

Storage jar with the rim turned down to the outside (fig.67,*6*; Papa-Afanasopulo, fig.1) has traces of a beater inside, remained from forming of the vessel.

There are 4 entire lids of vessels (fig.71,*1-4*, 72). Two of them are decorated with the drawn horizontal lines (fig.71,*2,4*, 72), one - with five vertical finger-like pressed lines (fig.71,*1*, 72), and one more - with expressive vertical burnishing (fig.71,*3*, 72). The analogies from the Golden Horde cities of the Low Volga region (Mikhal'chenko, 1973, p.123, 130, fig.3,*29*; Fedorov-Davydov, 1984, p.85, fig.60,*C5-7*; Fyodorov-Davydov, 1984, fig.48,*5-7*; Fyodorov-Davydov, 2001, p.166, 169, 171, tab.91,*3-5*, 92,*1-4,6-8*, 93,*1-2*) are known. The more remote parallels to Uvek lids are available in materials of the Bolgarskoe site of ancient city of the Golden Horde period (Khlebnikova, 1988, p.96-98, fig.71,*26-31*, 73) and from monuments of the Volga Bulgaria of the Xth - beginning of the XIIIth century (Belorybkin, p.29, fig.3,*8*; Khlebnikova, 1984, p.140, 151-152, 183, 190, fig.64,*5,7*, 99,*1*, 119), and also in materials of Belgorod on Dnestr of the end of the XIIIth - XIVth century (Kravchenko, p.77-78, fig.30,*1-2*) and Azak of the XIVth century (Perevozchikov, 1993, p.180, 185, fig.7,*9*).

The lamps are represented by four well preserved items: two of them (type 1) have ledges for candles at the centre (fig.71,*7,9*), the other two represent (type 2) small earthen saucers with handle-ledge (fig.71,*6*) or without it (fig.71,*8*). The lamps of both types find numerous parallels in materials of the Bolgarskoe site of ancient city of the middle of the XIIIth - beginning of the XVth century, in the Golden Horde monuments of the Low Volga and in Novgorod (*Arkheologiya / Drevnyaya Rus'*, p.249, tab.3,*35-36*; Mikhal'chenko, 1973, p.123, 130, fig.3,*30-31*; Khlebnikova, 1988, p.44, 89, fig.27,*8-13*, 63,*3-7,9,11-14*, 64; Fedorov-Davydov, 1984, p.85, fig.60,*C17-18*; Fyodorov-Davydov, 1984, fig.48,*17-18*; Fyodorov-Davydov, 2001, p.176, tab.95,*1-2,4*). The lamps of type 2 have analogies also in materials of other Volga Bulgarian monuments of the Xth - beginning of the XIIIth century (Belorybkin, p.29, fig.3,*10*; Kochkina, 1986-1, p.50-51, fig.11,*1-2*; Khlebnikova, 1984, p.139, 151, fig.61,*16-18*, 119), and also the Golden Horde city Azak (Volkov, 1992-1, p.7, 20, tab.1,*B8*; Galkin, 1975, p.256-258, fig.4, 5,*12*).

10 types of sphere-cone vessels (all of them are ornamented except type 10) are allocated: one of them (type 2) is represented by three entire forms, others - only by single items of them. Three vessels (fig.73,*3,5,8*) are ornamented using stamps. 11 other sphere-cone vessels and a number of their fragments kept in the museum of SUAK, were subsequently unpreserved (GASO, fund 407, inventory 2, file 188, p.5, 7-8; GASO, fund 407, inventory 2, file 303, p.87, N 514; GASO, fund 407, inventory 2, file 985, p.25, 69-70, 90, 93; KZVM, Vol.I, p.218-219, 221, 275, 280, 427-428, 433, NN 511, 514, 518, 713, 734, 1165, 1170, 1244; KZVM, Vol.II, p.2, 33, 111, 228, NN 1583, 1775, 2264, 3009).

Type 1. Three small vessels, ornamented by two horizontal lines (fig.73,*1*)[186]. Similar ornamentation of sphere-cone vessels is known from Dvin (Dzhanpoladyan, p.202, fig.1,*7*).

Type 2. A bit larger sphere-cone vessel decorated by three horizontal lines (fig.73,*4*; Krotkov, 1926, N 16).

Type 3. A vessel decorated with eight vertical modelled raised borders and horizontal flutes on the rim and bottom (fig.73,*2*). Similar vessel was found in Vladimir together with materials of the end of the XIIth - beginning of the XIIIth century (Rodina, p.149-151, fig.2).

Type 4. A sphere-cone vessel ornamented by groups of three vertical drawn lines, the space between which is filled with prints of a drop-like stamp (fig.73,*3*). The large fragment of similar sphere-cone vessel from Ukek is kept in Hermitage[187]. Similar articles from the Uvek site of ancient city were published in 1922 (Vinogradov, 1922, tab.6,*75,81*). It has analogies in materials of Belgorod on Dnestr (Kravchenko, p.61-62, fig.24,*4*; Kravchenko, Stolyarik, p.138-139, fig.1,*1*), the Tsarevskoe site of ancient city (Mikhal'chenko, 1974, p.47-48, fig.1,*6*; Fedorov-Davydov, 1984, p.85, fig.60,*D3*; Fyodorov-Davydov, 1984, fig.51,*3*) and Madzhar (Rtveladze, p.281, fig.1,*9*), the close articles occurred from Bulgar, from site Krasnyy Yar in Astrakhan region and from Egypt (Vinogradov, 1922, tab.6,*78-79,82*; Pigarev, 1994-2, p.212-213, fig.1,*9*); similar 'honeycomb' ornament on sphere-cone vessels is well known also from the Volga region up to the Dnestr region (Vinogradov, 1922, tab.1,*9*, 6,*76,80*; Gudimenko, p.73-74, fig.1,*1*; Kravchenko, p.61-62, fig.24,*1-3,5-6*; Kravchenko, Stolyarik, p.138-139, fig.1,*2-4*; Orlov, p.17; Pigarev, 1994-2, p.212-213, fig.1,*12*; Fyodorov-Davydov, 1994, p.141, 144, fig.27,*2*; Khlebnikova, 1988, p.94, fig.70; Fedorov-Davydov, 1984, p.85, fig.60,*D2,4*; Fyodorov-Davydov, 1984,

[173] Except for the article on the picture there are two other entirely analogical ones in the collection of SOMK: NN SMK 51973, 51975.

[174] GE N 58767, ZO-379.

fig.51,*2,4*)[175], it was also found in Central Asia and Egypt (Vinogradov, 1922, tab.6,*73,77*; Gens).

Type 5. A vessel with complex stamped and linear drawn ornament in the top part (fig.73,*5*; Fyodorov-Davydov, 1984, fig.52,*2*). Similar by form non-ornamented flat-bottomed sphere-cone vessel is known from Madzhar (Rtveladze, p.280-281, fig.1,*2*). The off-prints of the stamp 'herring-bone' also are known on one of Madzhar sphere-cones and on an article from Bilyar (Vinogradov, 1922, tab.3,*32*; Rtveladze, p.280-281, fig.1,*6*, 2). The analogies are known for the round stamp as rosettes-asterisks from Bulgar, Madzhar, Belgorod on Dnestr, the Low Volga region and Central Asia of the XIIth - XIVth centuries (Atagarryev, 1973, p.24, 39, fig.4,*3-4*, 12,*7*; Kravchenko, p.61-63, fig.24,*12*; Kravchenko, Stolyarik, p.140-142, fig.2,*2*; Pigarev, 1994-2, p.212-213, fig.1,*11*; Pugachenkova, 1983, p.266, fig.4,*5*; Rtveladze, p.280-281, fig.1,*6*, 2).

Type 6. It is decorated with horizontal flutes and slanting shading (fig.73,*6*; Krotkov, 1926, N 18; Fyodorov-Davydov, 1984, fig.52,*4*).

Type 7. A vessel ornamented by five horizontal drawn lines (fig.73,*7*). The article with similar ornaments occurs from Dvin (Dzhanpoladyan, p.202, fig.1,*9*).

Type 8. A sphere-cone vessel with ornamentation of the pair of drawn lines, the space between which is occupied by offprints of drop-like stamps (fig.73,*8*). The vessels with such ornament were found on the Tsarevskoe site of ancient city (Fedorov-Davydov, 1984, p.85, fig.60,*D1*; Fyodorov-Davydov, 1984, fig.51,*1*)[176] and in Madzhar (Rtveladze, p.281, fig.1,*3*).

Type 9. Known by the publications sphere-cone vessel without the marked head and with small flat bottom, decorated by stamps off-prints, including human images (Krotkov, 1926, N 29; Mikhal'chenko, 1974, p.47, fig.1,*2*; Fyodorov-Davydov, 1984, fig.53,*3*).

Type 10. Published non-ornamented vessel (Mikhal'chenko, 1974, p.47, fig.1,*5*; Fyodorov-Davydov, 1984, fig.52,*5*).

Tiny vessel (fig.73,*9*) slightly extended horizontally. Its purpose is not clear, as well as the purpose of a small mug (?) with beat rim and handle (fig.73,*10*, 74), on the smash of which there is a lamination of green glaze. It is possible, however, that the last article could be used in a forge as a furnace adjunct.

Tuvaks are represented by three items (fig.75,*1-3*; Papa-Afanasopulo, fig.1); one of them is glazed (fig.75,*1*). Similar by form vessels are known from materials of the Volga Bulgaria of the Golden Horde period (Khlebnikova, 1984, p.88-89, 140, 151, 190, fig.23,*10*, 63,*5*, 119; Khlebnikova, 1988, p.88, 90-92, fig.66,*1-5,7*, 68), and also from the Golden Horde cities of the Low Volga region, the Dnestr region, Azov Sea Littoral and from Central Asia (Volkov, 1992-1, p.5-6, 20, tab.1,*A16,B6*; Kravchenko, p.77-78, fig.30,*6*; Lunina, p.224, fig.3, II; Mikhal'chenko, 1973, p.123, 129, fig.3,*23*; Perevozchikov, 1993, p.180, 182, 188, 191, 199, 205, 209, fig.7,*5*, 9,*16,27*, 12,*17*; Perevozchikov, 1997, p.70, 72, fig.14,*8*; Fedorov-Davydov, 1984, p.84, fig.59,*D3*; Fyodorov-Davydov, 1984, fig.47,*3*; Fyodorov-Davydov, 2001, p.165, tab.90).

At the Uvek site of ancient city three well preserved money-boxes were found (fig.75,*4-5*, 77,*2*). There are only small smashes near the coin slot. Probably, these smashes were made during the extraction of Jochid coins. They did not have large diameter – it was not necessary to break the entire vessel to take them out. One more money-box from Uvek is mentioned only in the publication of the beginning of the XXth century and in archival materials (*Perechen' predmetov*, p.63, N 248; GASO, fund 407, inventory 2, file 983, p.138; KZVM, Vol.I, p.142, N 248). Similar money-boxes are well known from the Golden Horde monuments from the Low Volga region (Mikhal'chenko, 1973, p.123, 130, fig.3,*26*; Fedorov-Davydov, 1984, p.85, fig.60,*C16*; Fyodorov-Davydov, 1984, fig.48,*16*; Fyodorov-Davydov, 2001, p.163, tab.89,*1*)[177] and from Azov Sea Littoral (Volkov, 1992-1, p.5, 20, tab.1,*A18*; Galkin, 1975, p.256-257, fig.4, 5,*21*; Perevozchikov, 1993, p.169, fig.3,*10,12*), more remote analogies are present in materials of Bolgarskoe of the middle of the XIVth - beginning of the XVth century (Khlebnikova, 1988, p.95-97, fig.71,*14*) and Madzhar (Mikhal'chenko, 1973, p.123, 130, fig.3,*26*; Fyodorov-Davydov, 2001, p.163, tab.89,*5*) sites of ancient cities.

One ceramic ornamented flask kept in SOMK (fig.78-79).

In the publications two entire stamped articles of grey clay are mentioned: a flask (fig.80; Papa-Afanasopulo, fig.8) and a vessel with spherical body (Fedorov-Davydov, 1984, p.85, fig.60,*B3*; Fyodorov-Davydov, 1984, fig.59,*3*).

Besides the vessels a rattle with eight apertures (fig.77,*1*) occurs from the Uvek site of ancient city. It has parallels in materials of Azak (Volkov, 1992-1, p.6, 20, tab.1,*A17*; Volkov, 1993, p.145, 152, fig.4,*2-4*), and also a number of ceramic spindle whorls (*Katalog arkheologicheskikh kollektsy Gosudarstvennogo muzeya TASSR*, p.188; *Perechen' predmetov*, p.65; GASO, fund 407, inventory 2, file 166, p.11-13, 47; GASO, fund 407, inventory 2, file 188, p.5, 10, 13; GASO, fund 407, inventory 2, file 983, p.140; GASO, fund 407, inventory 2, file 985, p.26; KZVM, Vol.I, p.146, 351-355, 425, 443, 451, NN 268, 961, 966, 1154, 1341, 1407)[178] and fishing loads (GASO, fund 407, inventory 2, file 166, p.12-13; GASO, fund 407, inventory 2, file 188, p.9, 10; GASO, fund 407, inventory 2, file 985, p.26; KZVM, Vol.I, p.353-355, 436, 443, NN 966, 1286, 1342)[179]. There are also articles connected to ceramic manufacture – sepayas[180] and polisher[181]. Similar sepayas are well known by finds on the Selitrennoe (Bulatov, 1976-2, p.253, fig.3,*7*; Fyodorov-Davydov, 1984, fig.61,*2*) and Bolgarskoe[182] sites of ancient cities, in Belgorod on Dnestr (Kravchenko, p.59, fig.23,*16*), in Crimea (Yakobson, 1979, p.146-147, fig.93), in Azak (Perevozchikov, 1993, p.183, 216-

[175] Penza State United Museum of regional ethnography. Mokhsha, 1925.

[176] GE, exposition.

[177] SOMK N SMK 52048/A-2331 (AO 1530). Peskovatka.

217, fig.8,*8-15,16a*), in Derbent (Kudryavtsev, fig.46,*3-4*) and in Merv of the XIIIth - XIVth centuries (Lunina, p.222-223, fig. 2).

From a number of the pottery described above made by the Golden Horde potters, two samples are distinguished: small hand-made pot of Mordvin shape (fig.75,*7*) and an amphora handle with the part of a rim (diameter 5-5.5 cm) (fig.75,*6*) of Triliya manufacture, which are known by finds of the XIIth - XIVth centuries in the Black Sea Littoral, Azov Sea Littoral, Mediterranean area, in Rus and in the Low Volga region (*Arkheologiya / Drevnyaya Rus'*, p.34-35, 272, tab.26,*13,16-17*; Volkov, 1989, p.95-97, fig.15,*1-5*; Volkov, 1992-1, p.8-9, 21, tab.2,*2*; Volkov, 1992-2, p.148-150, 153, fig.4,*B,5,5-6*; Darkevich, Borisevich, p.162-163, 193, fig.106,*1-2*; Yakobson, 1950, p.104-105, fig.56-58; Yakobson, 1979, p.110-111, 113, fig.68,*5-7*; Fedorov-Davydov, 1984, p.84, fig.59,*D2*; Fyodorov-Davydov, 1984, fig.47,*2*; Fyodorov-Davydov, 2001, p.142, 145, tab.75, 77).

Glazed pottery is represented by kashi (fig.81,*1,6-7,9*) and red-clay ceramics (fig.74, 75,*1*, 81,*2-5,8*). The paste of kashi ceramics has white (fig.81,*6-7,9*) or pinkish (fig.81,*1*) colour. Paste of red-clay well burnt ceramics has brownish (fig.74, 81,*2-3,8*) or reddish (fig.75,*1*, 81,*4-5*) colours. On one of vessels there are traces of burnishing on the base (fig.81,*4*). Red-clay ceramics has only impurity of fine sand in the paste.

Among *kashi ceramics* there is a small jar (fig.81,*1*) completely covered by turquoise glaze, a fragmentised bowl with underglazed painting with dark blue and black paints on the grey background (fig.81,*6*) or the same and light-blue paint on the white background (fig.81,*7*), and also flask-like vessel (fig.81,*9*; Papa-Afanasopulo, fig.14) completely (except the base part) covered by turquoise enamel and decorated by cobalt on the edge of the rim (groups of four points in each) and on the top of figured modelling between which there is a repeating stylised Arabic inscription 'Success'.

The inner surface of one of the bowls (fig.81,*6*; Papa-Afanasopulo, fig.11) is shared with cross-like ornament into 4 sectors, in each of them there was a repousse vegetative ornament with the large image of lotus; outside the cup has a repousse arch ornament, complemented by points and strokes - this ornament finds complete analogies in materials of the Volga region, and also Belgorod-on-Dnestr, Khorezm, Madzhar and Saraychik (Agapov, Kadyrbaev, p.192-193, fig.3, 10-11; Valiullina, p.56; Grazhdankina, Rtveladze, p.127-128, fig.1,*1*; Kravchenko, p.93-94, fig.36,*1-3*; Perevozchikov, 1997, p.70, 72, fig.14,*1-2*; Skorobogatova, p.93-94, fig.1,*1*; Fyodorov-Davydov, 1976, fig.113; Fyodorov-Davydov, 1994, p.80; Yakubovsky, 1931, p.29-33, 35-36, fig.2, 4, 6, 11-13). As a whole the first bowl is similar to articles from the Selitrennoe site of ancient city and from Saraychik (Agapov, Kadyrbaev, p.188, fig.1, 4; Fyodorov-Davydov, 1994, p.83, 87, fig.5,*1*). The bottom of the second bowl (fig.81,*7*) is decorated with an eight petal rosette, around which there is vegetative ornament with S-like motives, outside this cup is also ornamented by arches of lines of black and dark blue colours. Similar arch ornament is present on numerous kashi ceramics of the Gold Horde and Iran. The ornament at the bottom of vessel has parallels in materials of the Tsarevskoe and Selitrennoe sites (Bulatov, 1969-1, p.49-50, fig.1,*1*; Papa-Afanasopulo, fig.10; Skorobogatova, p.93-96, fig.2,*9*; Fyodorov-Davydov, 1976, fig.107; Fyodorov-Davydov, 1994, p.97, 104-105, 107-109, 111, fig.12,*1*, 17,*2*, 19,*1*, 21,*1*; Yakubovsky, 1931, p.30-32, 43, fig.3, 26). S-like motives were also found on kashi ceramics, for example, from the layers of the Moscow Kremlin of the end of the XIIIth – XIVth century (Panova, 1986, p.224-225, fig.2) and from Egypt of the XIIIth - XVth centuries[183]. Flask-like vessel (qulabdan' in Persian, vessel for a rosy water) finds numerous parallels in the Golden Horde materials (Abyzova, 1981; Ballod, 1923-1, p.34, tab.7,*6*; Vakturskaya, p.325, fig.35,*5*, 36,*134*, 44,*132*; Valiullina, p.52-56, fig.1; Grazhdankina, Rtveladze, p.128-129, fig.1,*4*; *Keramika srednevekovogo Otrara*, p.157).

Red-clay glazed ceramics is represented by seven entire forms (three albarellos, tuvak two bowls and a small jar).

There are three vessels of the type albarello. One of them (fig.81,*2*) decorated by vertical flutes is covered with dark green glaze and have traces of cutting of clay by knife at the foot, others (fig.81,*4-5*) have rich carved ornamentation on a white slip and outside are is completely covered with light green glaze, except of the foot in one case (fig. 81, *4*), in over case (fig. 81,*5*) vessel covered by glaze from inside too. Practically identical to the first one (fig.81,*2*) but kashi article occurs from Urgench of the XIIIth - XIVth centuries (Vakturskaya, p.323, fig.33, 36,*135*, 44,*133*). The anover vessels (fig.81,*4-5*) are practically similar to the albarellos from the Tsarevskoe site of ancient city (Grekov, Yakubovsky, 1950, fig.41-42; Papa-Afanasopulo, fig.6; *Nomads of Eurasia*, p.15) and from Azak (Volkov, 1992-1, p.21, tab. 2,*10*); the complete analogy for one ware (fig. 81,*4*) is known also from Armenia (Bulatov, 1976-1, p.89; Yakobson, 1950, p.217, fig.125). As a whole vessels of albarello type were widely known in the Middle East in the XIIth - XIVth centuries (Darkevich, Starodub, p.186-187, fig.3; Allan, p.44-45, fig.26; *Islamic Art & Patronage*, fig.28, 58-59; Watson, fig.29), in the Golden Horde at the end of the XIIIth - XIVth century (Bulatov, 1969-2, p.37, 39, fig.1,*7*; Bulatov, 1976-1, p.83, 88-89; Kravchenko, p.77-78, fig.30,*7*; Papa-Afanasopulo, fig.6; Ryaboy, p.113-114, 116, fig.1,*3*; Fyodorov-Davydov, 1994, p.130-131; Fyodorov-Davydov, 1984, fig.39,*2-3*), in Spain of the XIVth - XVth centuries (Caiger-Smith, fig.29, 42, 51, 53; Dimand, p.225, 228, fig.150) and in Italy of the XVth – XVIth centuries (Allan, p.44); such vessels were also found in Egypt and Otrar (Bulatov, 1976-1, p.83; *Keramika srednevekovogo Otrara*, p.139; Fyodorov-Davydov, 1994, p.136).

[178] GIM N 34162, inventory 952, NN 48-49; NMRT NN 5365-56 (AA35-35), 5365-59 (AA35-36,37); SOMK NN SMK 51986/A-2272 (AO 1022), 52016/A-2302 (AO 1216), NVSP 28297 (AO 280).

[179] SOMK NN SMK 38575/A-68 (AO 305), 53336-53338/A-2419-2421 (AO 302-304, 308), NVSP 18121 (SUAK 170), 28297 (AO 280), 31471 (SUAK 2042/5, AO 910), AO 307.

[180] SOMK N SMK 51984-51985/A-2270 (SUAK 971, AO 994-995).

[181] SOMK N NVSP 31441 (AO 906/1).

[182] GE, exposition.

[183] GE, exposition.

Tuvak (fig.75,*1*) is covered with green glaze only from within.

Non-ornamented bowl (fig.81,*5*) is covered with yellow-brown glaze on white slip.

The bowl with dark green glaze on white slip (fig.81,*8*) has at the bottom a carved underglaze 'incised ornament' in sgraffito technique as six-petal flower. Between the petals there are spiral quirks. Similar bowls with six-petal or four-petal flowers are known from the Tsarevskoe and Selitrennoe sites (Bulatov, 1976-1, p.87, 102, 107, tab.III,*1,4*, VIII,*2*; Guseva, 1974, p.137, fig.9,*6*; Fyodorov-Davydov, Vayner, Guseva, p.122, tab.VII,*8,11*). Similar spiral quirks are known on glazed ceramics of Byzantium and Crimea of the XIth - XIVth century (Bulatov, 1969-1, p.55; Kravchenko, p.74; Makarova, 1967, tab.VIII,*5-6*, IX,*3*; Finogenova, p.199, fig.4; Yakobson, 1950, p.173, 175, 181, 183-184, 187-190, 194, 196-197, 207, 216, tab.III,*17*, VI,*31*, XII,*51,51a*, XVI,*60-61*, XX,*74-75*, XXI,*79-80*, XXII,*82*, XXV,*96*, XXVII,*107-108*, XXXII,*130*, XXXIV,*142*; Yakobson, 1979, p.120-122, 124-128, 135-136, 138-142, fig.74,*4*, 77, 78,*2,7*, 79,*3-4*, 85,*3*, 87,*1*, 88,*3*, 89,*1-2,4*), the Tsarevskoe (Bulatov, 1976-1, p.102, tab.III,*3*; Guseva, 1974, p.137, fig.9,*2*; Fyodorov-Davydov, Vayner, Guseva, p.118-119, 122, tab.V,*30*, VII,*7,12*) and Selitrennoe (Bulatov, 1976-1, p.92-93, 104, 106-107, tab.V,*2*, VII,*2-3*, VIII,*3*, IX,*6*; Fyodorov-Davydov, 1976, fig.114; Fyodorov-Davydov, 1994, p.106-107, 126-129, fig.18,*1*, 24,*3*, 25,*2,4*; Fyodorov-Davydov, 1984, fig.38,*1*, 40,*1*, 42,*2*) sites, Moscow of the XIVth - XVth centuries (Koval', p.95, 98, fig.1,*6*), Azov (Bulatov, 1969-1, p.54, fig.2,*2*; Perevozchikov, 1993, p.196, 200-203, 205, 210-211, 213-215, fig.10,*13,14a-16*, 11,*2-4,8,20*, 12,*1-3*, 13,*12,18-19,21*, 14,*5*; Romanchuk, Perevozchikov, p.102-103, 105-107, 114, 124, fig.6, 7,*16,24*, 8,*20-21,31*, 14,*49,60*, 24), Belgorod on Dnestr (Kravchenko, p.65, 68-78, 90-92, 105-107, fig.25,*3,6-7,12-13,16*, 26,*4-7,10-12*, 27,*1,3-6,9*, 28,*4-5,7-8*, 29,*1-2*, 30,*2,7,13*, 35,*1,3,5-7*, 40,*6*, 41,*1*), Staryy Orkhey of the XIIIth - XIVth centuries (Atagarryev, 1973, p.51, fig.15,*3*; Byrnya, Russev, p.125-127, fig.3,*1*), and also medieval Central Asia (Akishev, Baypakov, Erzakovich, fig.65, 67,*2,4*, 70,*2*, 75; Buryakov, p.95, fig.12; Zadneprovsky, p.169-170, 172, fig.6,*13,21-22*, 7,*5*) and Spain of the XIVth - XVth centuries (Caiger-Smith, fig.38, 40).

A jar (fig.74, 81,*3*) is also covered with dark green glaze on white slip. Similar vessels are known from Khersones (Yakobson, 1950, p.112-113, fig.77,*2*)[184].

§ 2.7. Old Russian materials

Some articles of Old Russian origin found on the Uvek site of ancient city were already published and mentioned earlier. They are small oval stone seal of prince Michael with the animal image at the centre (Andreev, p.244-246; Bulychev, Voronezhtsev, Maksimov, Totfalushin, p.28; Dukhovnikov, 1894-1; Kedrov, p.306; Medoks, 1894; Poluboyarinova, 1972, p.181; Poluboyarinova, 1973, p.22-23; Poluboyarinova, 1978, p.102; Ponomarev, 1879, p.332; *Razvaliny Ukeka*)[185], crosses and enkolpions (Andreev, p.244-246; *Arkheologiya / Drevnyaya Rus'*, p.217-218, 220, 367, tab.121,*20*; Bulychev, Voronezhtsev, Maksimov, Totfalushin, p.28; Iskhizov, p.137; Medoks, 1893, p.47, NN 50-52; Oppokova, p.32; *Povolzh'e. Priroda, byt, khozyaystvo*, p.448; Poluboyarinova, 1972, p.177-181, fig.5,*2*, 6; Poluboyarinova, 1973, p.11; Poluboyarinova, 1978, p.95-102, fig.25,*2*, 26, 28; *Priobreteniya otdel'nykh predmetov drevnosti i kollektsiy*, p.40; *Protokol zasedaniya SUAK. 28-go noyabrya 1895 goda*, p.35; Putsko, p.249; Rybakov, 1948, p.530; Rybakov, 1964, p.39; Rykov, 1936, p.126; Spitsyn, 1914, p.100, 103, fig.27, 29; *Uvekskie drevnosti*, p.158; Fyodorov-Davydov, 1973)[186], stone and bronze icons (*Arkheologiya / Drevnyaya Rus'*, p.218, 220, 367, tab.121,*19*; Bulychev, Voronezhtsev, Maksimov, Totfalushin, p.28; Iskhizov, p.137; *Katalog vystavki 1882 goda OAIE*, p.55-56, N 517; Maksimov, 1964, p.226-227; Medoks, 1893, p.47, N 53; Nikolaeva, p.43, 146-147, NN 365-368, tab.65,*1-4*; Oppokova, p.32; *Povolzh'e. Priroda, byt, khozyaystvo*, p.448; Poluboyarinova, 1972, p.177-178, 180-181, fig.5,*1,3*; Poluboyarinova, 1973, p.11; Poluboyarinova, 1978, p.96-102, fig.25,*1*, 27, 29-30; Porfiridov, p.119-120; Rybakov, 1948, p.528, 530; Rybakov, 1964, p.40; Spitsyn, 1914, p.100, 102-103, fig.28, 30-31; *Uvekskie drevnosti*, p.158)[187], the part of a stone casting mould for casting kolts (*Arkheologiya / Drevnyaya Rus'*, p.219; Bulychev, Voronezhtsev, Maksimov, Totfalushin, p.28; Iskhizov, p.123; Maksimov, 1964, p.227; *Perechen' predmetov*, p.65, N 267; Poluboyarinova, 1972, p.181; Poluboyarinova, 1978, p.102; Rybakov, 1948, p.530, fig.128; Spitsyn, 1914, p.101-102, fig.24; Fyodorov-Davydov, 1994, p.184) and a fragmentised bronze kolt, a ring with a swastika image (Nedashkovsky, 1995-4, p.101, 108, fig.1,*8,10*), a bead and an amber pendant (Poluboyarinova, 1991, p.43-44, 64, 68, fig.3,*9*, 5,*17*), details of khoroses and pottery (*Arkheologiya / Drevnyaya Rus'*, p.218; Bulychev, Voronezhtsev, Maksimov, Totfalushin, p.28; Poluboyarinova, 1972, p.180-181, fig.7,*1-2*; Poluboyarinova, 1973, p.11; Poluboyarinova, 1978, p.92, 100-102, 122, fig.31-32). There is an indications on 5 Russian coins of the XIVth - XVth centuries, found in Uvek[188]. During the last decades some Old Russian materials occurring from the neighbourhood of the Golden Horde Ukek were also published (*Arkheologiya / Drevnyaya Rus'*, p.217; Kasankin, 1994, p.95-96, 99, 101, fig.1,*5,17*, 3,*2,5-6*; Kasankin, 1997-2, p.185-188, fig.1; Maksimov, 1960, p.190-193; Poluboyarinova, 1972, p.184-185, fig.9,*1-2*; Poluboyarinova, 1973, p.11; Poluboyarinova, 1978, p.121-122, fig.43,*1-2*).

[184] According to the oppinion of I.V.Volkov, this jar must be attributed to the production of ceramic workshops of Azak.

[185] Moulds from the seal are mentioned in the documents of SUAK (GASO, fund 407, inventory 2, file 234, p.16; GASO, fund 407, inventory 2, file 235, p.75, N 14; KZVM, Vol.II, p.41, 98, NN 1814, 2182).

[186] Indications on 6 bronze (2 of them - enkolpions) and 2 silver crosses, found in the Uvek site in 1895-1912 are given in the archival materials (GASO, fund 407, inventory 2, file 44, p.56; GASO, fund 407, inventory 2, file 234, p.69; GASO, fund 407, inventory 2, file 983, p.138, 140; GASO, fund 407, inventory 2, file 985, p.25-26, 82, 87, 96; KZVM, Vol.I, p.115, 255, 268, 289, NN 174, 644, 691, 766; KZVM, Vol.II, p.18, 59, NN 1667, 1920).

[187] Two published stone icons are mentioned in KZVM (KZVM, Vol.I, p.135, N 222; KZVM, Vol.II, p.4, N 1598).

In the given paragraph only unpublished materials of Old Russian origin are described.

In museums collections there are a lot of unpublished articles from the Uvek site of ancient city, which can be connected with the Old Russian population of this monument. Mainly it is the occasional finds; if the exact place and date of a find are known, they are given.

Amber articles are very interesting. They were imported to the Middle and Low Volga region from the territory of Rus (Poluboyarinova, 1991, p.14-15; Rozenfel'dt, 1978, p.198, 208): fragments of two rings - one of them was round in section (fig.82,*B,1*), and the other one had rectangular dashboard (fig.82,*B*,*2*), a drop-like flat-convex pendant with smashed top part (fig.82,*B*,*3*) and completely preserved rectangular-like flat-convex pendant with two eyes (fig.82,*B*,*4*). The amber rings with rectangular dashboards are known in the late Golden Horde layer of Bulgar, in materials of Old Russian cities of the XIIth - XIVth centuries and in Northern Poland; the rings with rectangular-like dashboards of various types of stone, and also drop-like amber pendants (known also from I Izmerskoe settlement) are available in the collections from the Selitrennoe and Bolgarskoe sites of ancient cities (Kazakov, 1986, p.80, 110, fig.4,*6*; Kazakov, 1991, p.141, fig.45,*9*; Poluboyarinova, 1991, p.64, 68, 71, 77, fig.5,*15*, 6,*3,12-19*; Rozenfel'dt, 1978, p.207, fig.2,*10-11*). Flat-convex drop-like cornelian and serpentine pendants are known from a number of sites: Bolgarskoe, Selitrennoe, Otrar and Shehr-Islam (Poluboyarinova, 1991, p.61-62, 64, 66, fig.4,*2*, 5,*7*). Besides the articles described above, 2 amber beads were found on the Uvek site of ancient city in 1910 (GASO, fund 407, inventory 2, file 188, p.8; KZVM, Vol.I, p.436, N 1275); they have not been preserved, their form is unknown. Amber beads of various types were spread in the Middle Ages practically on the whole territory of East Europe, they were also found in Karakorum (Valiullina, Rudenko, p.68-70, fig.1,*11,14*; Gaydukov, p.105, 167, fig.76,*8*; Kazakov, 1986, p.80, fig.4,*7*; Kazakov, 1991, p.141, fig.45,*6*; Poluboyarinova, 1991, p.42-45, fig.3,*1-11*; Rozenfel'dt, 1978, p.200-203, fig.1,*2-19*; Savel'eva, Klenov, p.25, fig.11,*49*; Khuzin, 1995, p.115, 120, 192, 195, fig.24,*20,27-28,30,39*, 27,*15*; Khuzin, Valiullina, p.101-102, fig.2,*10-12*).

Two oval in section dashboard glass semi-translucent fingerings - green (fig.82,*B*,*7*) and yellow[189] (fig.82,*B*,*6*) - can be related to articles of the Russian handicraftsmen, because all researchers consider round in section fingerings of green and yellow glass, found at the monuments of the XIIIth - XIVth centuries, as Old Russian (Busyatskaya, 1976, p.48; Poluboyarinova, 1988, p.194; Shchapova, p.106, fig.1,*1-2*).

13 one-colour glass bracelets[190] come from the Uvek site of ancient city: 7 of them are smooth - turquoise (fig.82,*B*,*9*), black (fig.82,*B*,*5*), dark blue (fig.82,*B*,*14*), violet (fig.82,*B*,*15*)[191], light-blue[192], green and red, and 6 are twisted - yellow (fig.82,*B*,*10*), 3 green (fig.82,*B*,*12*) and 2 turquoise (fig.82,*B*,*11,13*). On four smooth bracelets dashboards were partially kept (fig.82,*B*,*14-15*), and on two twisted ones the linking place of the ends of the glass pivot bent into a bracelet (fig.82,*B*,*12-13*) is well notable. One article (fig.82,*B*,*10*) obviously is an industrial spoilage. One more bracelet (fig.82,*B*,*12*) was found in 1994 on the area of a former kindergarten to the north - north-west from the station Pravoberezhnyy: the given area of the site of ancient city, judging by the finds of coins[193], can be dated from the 20-s up to middle 60-s of the XIVth century. Without the research of chemical structure of the described bracelets it is difficult to define their origin, however, basing on the form and colour of the articles from Ukek it is possible to assume that the majority of them is Russian, as well as the majority of glass bracelets from Bulgar and Bilyar (Poluboyarinova, 1988, p.192-193; Khuzin, Valiullina, p.105). Not stopping in detail on rather numerous analogies we shall just note that besides Rus and the pool of Volga the close types of bracelets were distributed in the Middle Ages in the south of East Europe, in Transcaucasia and Central Asia (Busyatskaya, 1973, p.6-7; Busyatskaya, 1976, p.45-46; Kudryavtsev, p.143-145, 149-150, 232, fig.63,*27,32,35*, 64,*1-6*, 65,*2,5,7-8,10*; Poluboyarinova, 1963, p.166-167; Nesheva, p.51-52, fig.8; Spinei, fig.16).

In the Uvek collection there is a massive 14-facet bronze eyelet (fig.82,*B*,*17*) of a cross-enkolpion. The closest analogies to the given eyelet are known in Old Russian materials of the XIIth - XIIIth centuries from the Dnepr region (Alekseev, 1974, p.205-206, 210-211, 213-214, fig.1,*7*, 4,*1,4*; *Drevnosti russkie. Kresty i obrazki*, p.16, 22, tab.VI, IX, NN 67-70, 114). In connection with this article it is necessary to mention the unfinished half of stone casting mould (fig.82,*B*,*25*), intended probably for casting similar bronze eyelets. The find of this moulding form allows to support the assumption of M.D.Poluboyarinova (Poluboyarinova, 1972, p.186), that in the Golden Horde Ukek the articles of Orthodox religion -

[188] One of them was stroked 'by the Russian money-minters as an imitation of the Tatars one' (*Protokol III-go obshchego sobraniya gg. chlenov OAIE 4 sentyabrya 1878 goda*, p.47). The coins mentioned in the documents of SUAK archives (Archives of SOMK, fund 85, inventory 1, file 72, p.14; KZVM, Vol.II, NN 2439, 3059) are the 'copper Russian coin of Mongol period of apanage principalities', the Tver pul of the XVth century with the image of a bird, and also the pul of the Gorodenskoe principality of the period of Boris Aleksandrovich (1425-1461) with an animal image to the left and the coin with the image of 'a prince with his hands near the belt - on the other side there is unclear legend'. It is possible to assume that 'a prince' means Ryazan tamga similar to the Cyrillic letter 'F', which was present on the Ryazan silver coins of 1380-1456.

[189] N.N.Busyatskaya pointed on two similar yellow rings from the Uvek site of ancient city (Busyatskaya, 1976, p.72).

[190] The bracelets not figured on the illustrations are described according to the publication (Busyatskaya, 1976, p.71-72).

[191] The given bracelet, kept in NMRT, does not have inventory numbers. So it is related to Uvek materials only presumably.

[192] The fragment of a light-blue bracelet was found in 1905 in the region to the north-north-west from the Neftyanaya station (not far from Nobel oil store-houses) together with the Ukek silver coin of Tokta of 706 A.H. (1306-07) and a copper one, striked in 766 A.H. (1364-65) in Gulistan (Archives of SOMK, fund 85, inventory 1, file 135, p.3, 6).

[193] The following coins were found: Uzbek: Saray 721(?) A.H. –1, 731 A.H.-1; Khizr: Saray al-Djedid 76? A.H.-1; and also a small hoard of twelve copper puls of 1330-s: Uzbek: Saray? (with lion and sun) year?-12. It is interesting that almost all passportised Old Russian articles occurred from this central district of the site (see Rykov, 1928, p.80).

bronze enkolpions and icons - were not only used, but they were also produced. To the icons cast in Uvek it is possible to attribute a fragment of a defective article with not removed burr on the edges (fig.82,*B*,*18*). Probably the icon had a round top; it is possible to trace on it the blessing right hand and a cross on the robe of the saint. Similar disposition of the hand and cross on attire present on Novgorod osseous and slate icons of the first half of the XIVth century and the end of the XIIIth - beginning of the XIVth century with the image of St. Vlasy (Nikolaeva, p.70-71, tab.19,*4,9*, NN 95-96; Yanin, 1973, p.269, 271; Yanin, 1978, p.122, fig.1), and also on numerous stone icons of the XIIth - XVth centuries with the image of St. Nicolay (Nikolaeva, tab.2,*2*, 4,*6*, 13,*3*, 14,*2*, 18,*2,6*, 19,*3*, 21,*4-5,7-8*, 22,*6*, 23,*1*, 24,*1,3*, 29,*1*, 30,*1,5-6*, 31,*3-4*, 34,*1-2*, 35,*3,5-6*, 36,*1-3*, 39,*5-6*, 41,*3*, 42,*3*, 46,*3,5*, 48,*4*, 49,*1-2*, 50,*7-8*, 51,*2-3*, 52,*4*, 53,*3,5*, 56,*1-3,5*, 57,*1*, 63,*1-2*, 65,*4*; Poluboyarinova, 1972, p.178, 180, fig.5,*3*; Poluboyarinova, 1978, p.99-100, fig.30; Sedova, 1965, p.263, 265, fig.1,*8*; Sedova, 1981, p.174, fig.74,*6*)[194]; it is fixed also in the images of the same saints in the Old Russian icon-painting of the XIIth - XIIIth centuries (Anisimov, p.130, 148).

The fragments of oblong bronze articles with two (fig.82,*B*,*19*) and three (fig.82,*B*,*20*) apertures and raw after cast edges can be defined as a part of cast details of chains from incensory, known by materials of Rus and the Tsarevskoe site of ancient city (Poluboyarinova, 1978, p.60-61, fig.9). These hand-made articles also can be attributed to the articles of Ukek handicraftsmen.

Two bronze candlesticks from khoroses are interesting. One of them (fig.82,*B*,*21*) has a thorn, on which the candle was put, and the other one has a cartridge for lining a candle (fig.82,*B*,*22*). The first article is similar to the whole series of articles of the XIth - beginning of the XVth century from Old Russian cities and Bulgar (*Arkheologiya / Drevnyaya Rus'*, p.166-167, 218, 343, 367, tab.97,*2-4*, 121,*23*; Vagner, p.25-27, fig.10,*1-7*; Gaydukov, p.99, 162, fig.71,*8*; Darkevich, Borisevich, p.321, tab.93,*12*; Poluboyarinova, 1993, p.31-32, fig.8,*1*), the second one is close to a candlestick from Mstislavl' (Alekseev, 1993, p.221, 229-230, fig.4,*2*), dated as the XIVth - XVth centuries.

Bronze incensory with the broken off handle (fig.82,*B*,*23*) has analogies in materials of Novgorod of the XIIIth century, Korela of the XIVth century, Bulgar and settlement Iskra (the layer of the XIIIth - XIVth centuries) in the pool of Vyatka (*Arkheologiya / Drevnyaya Rus'*, p.218, 367, tab.121,*9*; Kirpichnikov, 1979, p.62, 64, fig.4,*7*; Makarov, 1984, p.104-106, fig.7,*5*; Poluboyarinova, 1993, p.32-33, fig.8,*5*).

An Old Russian osseous seal with the name of Semen occurs from the site of ancient city (Kramarovsky, 1999-2, p.39-40, fig.2)[195].

In the finds from the Uvek site of ancient city pottery of Old Russian shapes (fig.82,*B*,*26-28*, 83,*1-7,13-14,16-17*) is represented also: fragments of vessels with a diameter of the rim from 12 up to 22.5 cm. Seven rims (fig.83,*1-7*) were found in the same district of the site as the glass bracelet (fig.82,*B*,*12*) and, hence, they can be dated as the 20-s – the middle of the 60-s of the XIVth century. Similar ceramics, one rim of which has an aperture made while repairing the vessel (fig.83,*24*), was found in 1991 during the works of D.G.Barinov in the building dated by coins as the 20-s - 30-s of the XIVth century (fig.83,*24-30*).

According to the impurities the given pottery complex can be divided into three groups[196]: A - with an impurity of beat stone, in most cases combined with sand (fig.82,*B,27-28*, 83,*3-5,7,13,16-17,26-27,29*), B - with an impurity of fine sand (fig.82,*B*,*26*, 83,*2,6,14,24-25,28*) and C - with an impurity of fine grog (fig.83,*1,30*). Non-ornamented pots of group C with an impurity of grog, unusual to Old Russian ceramics, were probably produced on Russian samples by Mordvin potters[197].

The forms of rims are rather various.

White clay (other crockery is of various shades of brown and grey colours) fragment with turned down to the outside and pressed down to the neck by the edge of the rim (fig.82,*B*,*26*) is similar to Old Russian rims of the second half of the XIIIth - beginning of the XIVth century from Bulgar (Poluboyarinova, 1993, p.44, fig.16,*2*). Typologically close pottery is known also from Old Russian monuments, from the Vodyanskoe site of ancient city and from settlement Berezovka (Darkevich, Borisevich, p.413, tab.136,*6*; Poluboyarinova, 1978, p.90, 105, fig.22, 34).

A rim turned down to the outside with wrapped up inside and flattened edge (fig.83,*13,24,26*) was observed on the vessels from the Middle and Low Volga and from Russian lands (Kochkina, 1986-2, p.119-121, fig.1,*13*; Poluboyarinova, 1978, p.90-91, 105-106, fig.22, 34-35; Poluboyarinova, 1992, p.137, 139-140, fig.2,*4-5*; Poluboyarinova, 1993, p.37, 39-41, 44-47, 79, fig.11,*3-4*, 13-15, 16,*1-2*, 17,*1-2*, 18,*2-3*, 30,*6*; Khlebnikova, 1988, p.34, fig.16,*5*).

The rim with wide board is a rare form. It is ornamented by horizontal lines (fig.83,*14*); the similar articles, but with wavy ornamentation on the rim, were found at the Vodyanskoe site of ancient city and in Smolensk region (Poluboyarinova, 1978, p.90-91, fig.22).

Other rim forms (fig.82,*B*,*27-28*, 83,*1-7,16-17,25,27-30*), as well as Old Russian crockery from the monuments of Ukek neighbourhood (fig.82,*B*,*29*, 83,*8-12,15,18-23,31-42*), also are similar to ceramics very well known by materials of Rus

[194] On three from this icons Nicolay is accompanied by saints Averky, Ipaty, Vasily, Grigory, their right hands are also near the crosses on their shoulders.

[195] GE N 7273,33.

[196] The pointed three groups of pottery were marked in the work of M.D.Poluboyarinova on the materials of the Bolgarskoe site of ancient city (Poluboyarinova, 1993, p.35).

[197] The presence of Mordvin component in the Ukek population is supported by eleven clasps-syul'gams and hand-made vessels of Mordvin look found at the Uvek site of ancient city (see Nedashkovsky, 1994-1, p.63-65; Rykov, 1936, p.75, 126).

and the Volga region (Poluboyarinova, 1978, p.90, 92, 94, 105-106, 115-116, 119, fig.22-24, 34-35, 39-40, 42; Poluboyarinova, 1992, p.136-141, fig.1-6; Poluboyarinova, 1993, p.37-41, 44-46, 48, 79, fig.11,*2*, 12-18, 19,*1,3*, 30,*3-5,8-11,14*; Khlebnikova, 1984, p.170, 199-200, fig.90,*2-3*, 113,*1,3-4*, 114,*1-4*; Khlebnikova, 1988, p.34, 36, 52, fig.16,*4,8-13*, 19,*1-4*, 32,*1-5*).

Chapter III.

THE REGIONS OF THE GOLDEN HORDE CITY UKEK

At this point it would be useful to characterise the Golden Horde archaeological monuments of the central parts of the Saratov Region according to the historic memory of the Russian peasant Population from the XIXth – beginning of the XXth century.

The XIXth – beginning of the XXth century are not by chance chosen as the chronological limits of this division. The earlier time gives us practically no information about the attitude of peasant population towards the archaeological monuments under consideration, except for a note by I.I.Lepekhin about the legends of a town situated on the area of the Uvek site of ancient city and fallen down through the ground (*Dnevnye zapiski puteshestviya*, p.378). As for the XXth century, the influence of the educational system had become already significant enough to reflect on the folk impressions of the local historic monuments.

By the end of the XIXth century more than half a millennium had passed since the ceasing of functioning of the Golden Horde settlements and burial grounds in the central part of Saratov region.

It would have been natural if absolutely all legends of those events had ceased existing in the historical memory of the local population (the majority of which was Russian as early as the XVIIth century). However, a closer investigation shows that it is not so. Certain glimpses of information had been preserved.

Practically everywhere in the Lower Volga region the peculiar names of barrows were spread: 'The Tomb above Mamay Yar', 'The Mamay Mars' (Minkh A.N. Razboi i klady, p.11-12, 165). The nowadays widely known 'Mamay Barrow' in Volgograd (former Stalingrad) should also be noted. In Saratov uezd a legend was preserved about the construction of barrows in the Golden Horde times: 'Mamay left those signs' (Shcheglov, 1903, p.30); in other parts of modern Saratov region the erection of the barrows was also attributed to Mamay, and the barrows themselves were called 'the Tatar tombs' (Minkh A.N. Razboi i klady, p.184).

G.S.Sablukov wrote in 1846 about Uvek site of ancient city: 'Till present time among the local population the legend is preserved about the life in antiquity of Tatars in this place… the legend and the mere observation point out here a cemetery and a multitude of some tombs' (Sablukov, 1884, p.311). The fortifications of the Uvek site of ancient city (a bank and ditch stretching from Kalancha hill to the Volga bank) were as late as the 70s – 80s of the XIXth century called by peasants "Mamayskaya krep' " (Ponomarev, 1879, p.322, 328, 334), "Mamaeva krep' " (F.G.), that is "Mamay's fortification, fortress": "there were *krepi* here, *mamaytsy*'s ones" (Ponomarev, 1879, p.322). The biggest highland on the territory of the Uvek site of ancient city was called "Mamay's shikhan" (Krotkov, 1915, p.111). The found human bones from the Golden Horde burials were attributed to "Mamay's warriors" (Ponomarev, 1879, p.324). Even the ancient objects found on the site were known as "Mamayshchina" (Minkh, 1879, N 220; Ponomarev, 1879, p.324-325), "Mamay's things" (Vasil'chikov, p.27). Very interesting is the dialogue of a well-known Kazan archaeologist P.A.Ponomarev with peasants of Naberezhnyy Uvek village:

" - What are these hills and holes here?

- We hear, 'Mamaytsy' lived here… They must have had their holes here…
- What are there people 'Mamaytsy'?
- They must have been Tatars" (Ponomarev, 1879, p.324).

The Chardym I hillfort of the Early Iron Age (there are also not numerous materials of the Bronze Age) which functioned at the Golden Horde time, had a folk name 'Tatarsky Gorodok' ('The Tatar Town') (Krotkov, Shishkin, 1910-2, p.86; Krotkov, Shcheglov, p.43-45, 48).

On the Ahmat hillfort, which, like the previous monument, had fortifications constructed in the Early Iron Age (Gorodetskaya culture), materials of the Bronze Age and Golden Horde period were found. The folk legend considers the site to be the place of the caravan site of the Jochid khan Ahmat (Akhmet) where 'Mamays' lived (Shcheglov, 1910,

p.100).

The other settlements of the Golden Horde period on the territory under consideration, which, as a rule, had no fortifications or other well-observed signs, were not reflected in the historical memory of the local population.

In the Saratov region there were also numerous legends about 'caves' and 'fall-downs'. They were confirmed by finding the remnants of brick and stone constructions – the basements of buildings and burial crypts, which indeed resembled underground passages or caves. '[Vsevolod – L.N.] Krestovsky saw there vaults and passages made of square Tatar bricks, exactly the same as in ancient constructions in Naberezhnyy Uvek' (Dukhovnikov, 1894-2, p.160). There are mentions about finds in the 'caves' of knives, kitchen utensils, coins and other objects. One of the 'caves' in the Uvek site of ancient city was called 'Sten'kina' (Dukhovnikov, 1894-2, p.160), reflecting the influence of the later 'rebellious' XVIIth century (Stepan Razin's rebellion) on the peasants' impressions.

One of the forms of the historical memory can be considered the preservation by the population of some toponymes, which are most likely to date back to the Golden Horde time (see introduction).

One of the monuments (the Ahmat hillfort) is connected in the historical memory of the Russian peasants with the activity of the Great Horde khan Ahmat (Akhmet)[1] who ruled in 1465 – 1481. Ahmat, the son of Kichi-Muhammad, took the last attempt to restore the vassal subordination of Rus to the Horde, which ingloriously ended in 1480 by 'standing on Ugra' (About Ahmat see: Alekseev, 1992, p.145, 179-181, 192; Gorsky, p.155-178; Grekov, Yakubovsky, 1950, p.421-428; Safargaliev, p.264-265, 267-272).

It is symbolic that many objects – sites, barrows, burials and even separate finds – were connected with the name of Mamay. This Golden Horde leader took an active part in the internecine wars of the 60s – 70s of the XIVth century. Since 1361 till 1380 he managed (sometimes partly) to control the territory from Dnestr to Volga. Mamay probably also more than once captured the capital city Saray al-Djedid on the left bank of Volga (in 1360/61-1363/64, 1366/67, 1369/70, 1371/72 and in 1375/76). Not being a Chingizid, Mamay was obliged to rule through khans-substitutors – Abdullah (1361-1370), Muhammed-Bulyak (1370-1380) and Tulyakbek (1380). Being defeated by the Russian troops on the Kulikovo field on the 8th of September 1380, and then by the Toktamysh army on the river Kalka, having lost the majority of supporters, in 1380 Mamay escaped to the Crimea where in Kaffa was killed by the Genoa people (About Mamay see: Gorsky, p.81-100; Grekov, Yakubovsky, 1950, p.275-280, 282-285, 287, 289-294, 316, 321-322; Grigor'ev, 1983, p.29, 31-47, 50-51, 53-54; Egorov, 1985, p.58-65, 209-211; Mukhamadiev, 1983, p.88, 90-97; Nasonov, p.122-134; Safargaliev, p.116-117, 123-126, 128-136, 142-144).

However, we can assert that the influence of Mamay on the events in the near-Volga part of the modern Saratov region was not very significant: the synchronic coins of the 'Saray' khans prevail over the coins of the Mamay Horde khans. Anyway, one complex can be definitely connected with the attempts of Mamay to capture the Volga cities taken in the 1360-s (see this chapter bellow).

Nevertheless, the image of Mamay in the above cases is undoubtedly a collective image of a Golden Horde ruler, one of the characters of such pieces of Old Russian literature as 'Zadonshchina' ('Trans-Don Tale') (end of the XIVth century) and 'Skazanie o Mamaevom poboishche' ('The Tale of Mamay Fight') (end of the XVth – beginning of the XVIth century).

Further in this chapter all monuments of the second half of the XIIIth - XIVth century (all of them are situated in Saratov region), removed from the Uvek site of ancient city not more than 60 km (2-3 days of way) are characterised and analysed. The monuments are grouped concerning the types: settlements, sites, burial grounds, barrows and groups of barrows, coins hoards and separate monetary finds. The numbering of monuments in the text corresponds to numbering on the circuit (fig.84-85).

§ 3.1. Settlements

1. The Uvek site of ancient city. It is situated on the southern outskirts of Zavodskoy district of Saratov near the settlements Uvek and Neftyanoy and railway stations Uvek, Pravoberezhnyy and Neftyanaya. From the east the monument is bound to Volgograd reservoir, and from the west by mountain Kalancha (height 135 m). The basic part of the site area is densely built up by dwelling houses and industrial buildings. During its erection the archaeological layer was blocked by powerful horizon of ballast and building dust. The coastal part of a monument is not washed away - there is a concrete quay.

The borders of the monument may be established using the plans and descriptions of the end of the XIXth – first two decades of the XXth century. This is the period of wide archaeological works at the Uvek site of ancient city (1891 – S.S.Krasnodubrovsky, 1895 – de Bay, 1908-1911 - B.V.Zaykovsky, A.A.Krotkov, S.A.Shcheglov, 1913 – P.N.Shishkin, 1919 – F.V.Ballod etc.). According to them, in view of materials of our researches of 1993-1995 (Nedashkovsky, 1995-6, p.229; Nedashkovsky, 1996, p.280; Nedashkovsky L.F. Otchet o razvedkakh k yugu - yugo-zapadu ot Saratova v 1993 godu, p.3-4; Nedashkovsky L.F. Otchet o razvedkakh k yugo-zapadu ot Saratova v 1994 godu, p.6-8; Nedashkovsky L.F. Otchet o razvedkakh v yuzhnoy chasti Saratovskogo rayona v 1995 godu, p.2-4), the size of the Uvek site of ancient city is more than 3310 m from north to south and 1390 m from west to east. The monument forms a wide strip along Volga. The area of the site of ancient city without three small neighbourhood settlements (NN 19-21) is more

[1] Less probable is the connection of the legend with khan Seyd-Akhmet (1433-1455), the son of Kerim-Berdi, who ruled in the Crimea and the steppe regions near the Black Sea.

than 205 ha. The main part of materials from Uvek is dated from the third quarter of the XIIIth up to the end of the XIVth century.

2. Settlement Chernyshevka-1. It is situated 2.5 km to the south-east from the village Chernyshevka of Novoburassky area on the right bank of the river Chardym. On 100 m of the earth road S.Yu.Monakhov in 1982 found fragments of the Golden Horde pottery, bronze spring from lock and fragments of hand-made ceramics, including mesh of Gorodetskaya culture (Monakhov S.Yu. Otchet o razvedkakh, p.22, fig.100-101, 140).

3. Usovka. A small settlement (size, according to the data of 1981, about 50*10 m, but before the construction of reservoir the size was bigger) was discovered by M.E.Fokin[2] in 1958 and then investigated by N.M.Malov in 1975 and in 1981 (Malov N.M. Otchet ob arkheologicheskikh razvedkakh, p.10, fig.11,*9*; Malov N.M. Otchet ob arkheologicheskikh raskopkakh i razvedkakh, p.9)[3]. It is located on the south-west outskirts of village Usovka of Voskresensky area, at the edge of above-flood-lands terrace of Volga. Besides the Golden Horde pottery, crocks of Yamno-Poltavkinsky type were collected at the settlement.

4. The Chardym II hillfort (area 2000 sq m) and adjusted to it settlement. These monuments of Gorodetskaya culture settle down to north-east from the village Chardym of Voskresensky area (Mironov, 1989, p.107, 115). In the top layers of them ancient Mordvin and Golden Horde (on depth up to 80cm; a spindle whorl made from a wall of a vessel and a fragment of kashi (?) vessel were also found) pottery was found. Also at the settlement a rim of Old Russian vessel was found (Mironov, 1987, p.195; Mironov, 1994, p.86; Mironov V.G. Otchet ob arkheologicheskikh issledovaniyakh v Saratovskom Povolzh'e v 1983 godu, p.17-18, 20, 26, 57, 60, tab.5,*1*, 8,*10*; Mironov V.G. Otchet o polevykh issledovaniyakh v 1984 godu, p.8-9, 17, 19, 48-49, fig.7,*10*; Mironov V.G. Otchet o rabotakh Voskresenskoy arkheologicheskoy ekspeditsii Saratovskogo gosudarstvennogo universiteta 1985 goda, p.11-12, 18-19, 62, 64, 66, 68-69, 72; Mironov V.G. Otchet o rabotakh v 1986 godu, p.31, 37, 47, 66, fig.41,*6*; Mironov V.G. Otchet o rabotakh Voskresenskoy arkheologicheskoy ekspeditsii SGU v 1988 godu, p.8-9; Mironov V.G. Otchet o rabotakh Voskresenskoy arkheologicheskoy ekspeditsii Saratovskogo gosuniversiteta 1989 goda. Chast' 1, p.2-3; Morzherin K.Yu. Otchet ob issledovaniyakh, p.28, fig.11,*2*; Morzherin K.Yu. Otchet o razvedkakh v Rtishchevskom rayone, p.32-33, 43). The area, on which the Golden Horde materials are widespread, does not exceed 0.5 ha, however finds of the XIIIth - XIVth century are met practically on all open places of the hillfort. Within the fortifications the pottery of bronze epoch was also found.

5. The Chardym I hillfort. It is situated to the west from the village Chardym of Voskresensky area. It was repeatedly surveyed by investigations and excavations in 1910-1975 (Mironov, 1989, p.107-108, 115). Basic layers of the monument concern to Gorodetskaya culture (not numerous materials of bronze epoch were also met); its size is 65*70 m. During excavations in top layers a bronze clasp-syul'gama and a plate dated as the XIIIth - XIVth centuries, and also the Golden Horde pottery were found (Mironov, 1976; Rykov, 1933, p.61, 63, 73, 78; GASO, fund 407, inventory 2, file 138, p.57).

6. The Chardym IV hillfort. It is located to the east from the Chardym I hillfort (N 5). In the second half of the 1980-s the rests of Gorodetskaya culture monument (maximal fixed sizes 80*20cm) were completely investigated by V.G.Mironov (Mironov, 1994, p.85-86). During excavations at the monument the Golden Horde pottery was also found (Mironov, 1987, p.195).

7. Farm Mohovoy at the village Kleshchevka of Saratov area. In 1958 M.E.Fokin found the Golden Horde materials here[4].

8. The Ust'-Kurdumskoe hillfort. It is situated on the high cape between ravines 3 km to the south from the village Ust'-Kurdyum of Saratov area. This hillfort-refuge of Gorodetskaya culture period was investigated in 1910, 1920, 1961 and 1965 (Mironov, 1989, p.107, 112). At the monument the materials of the Golden Horde time (Rykov, 1928, p.81; Rykov, 1936, p.122) were found.

9. Settlement in 2.7 km to the west – south-west from the village Pristannoe in the mouth of the river Guselka, on its left bank. It is known from the 1920th, in 1966 the settlement was studied by D.S.Hudyakov, in 1975 – by N.M.Malov (Rykov, 1928, p.70)[5], in 1996 by the author (Nedashkovsky, 1997-2, p.267; Nedashkovsky L.F. Otchet o razvedkakh v Saratovskom rayone v 1996 godu, p.2-3). Nowadays the size of the monument (completely built up by summer residences) is 60*90 m, the area is about 0.4 ha; however a large part of the given Golden Horde settlement is obviously already destroyed by the reservoir. On the remained part of the settlement near a bluff at the river Guselka the Golden Horde burials (N 79) and the rests of kiln were found. In 1996 in the south-east part of the monument the rim of brown Old Russian vessel with the diameter of 12 cm with an impurity of beat stone and sand in the paste (fig.83,*18*) was found.

10. Settlement Oktyabrsky Gorodok of Tatishchevsky area. In 1984 V.B.Vorob'ev found to the south from the central part of the settlement on a right coast of the river a settlement of Bronze Age and the Golden Horde epoch with the size of 50*150 m; the Golden Horde materials from the monument are represented by 20 fragments of pottery and spindle ware from a wall of a vessel with ornament as big multiple-row wave (Vorob'ev V.B. Otchet, p.11, fig.87,*3*).

11. Settlement at the village Kurdium of Tatishchevsky area. It was investigated by A.A.Krotkov in 1915 (GASO, fund 407, inventory 2, file 2341). Besides fragments of the Golden Horde pottery (GASO, fund 407, inventory 2, file 138, p.57)[6] and a dirhem of Ukek coinage (Krotkov, 1923, p.29) - such coins were issued in an interval between 1266 and 1312

[2] Materials are kept in SOMK: N NVSP 24990.

[3] SOMK N NVSP 25449.

[4] Kept in SOMK: N NVSP 24989.

[5] SOMK NN 2678, 6058, NVSP 25452.

- also the rim of an Old Russian vessel was found at the monument (fig.82,*B*,*29*).

12. In 1998 within the boundaries of Saratov near the former village Polivanovka the author discovered a Golden Horde settlement with sizes of 260*280 m and the area of 4.1 ha, at present completely built over by summer cottages. On the surface of the monument fragments of red and brown pottery, ornamented with drawn parallel lines and sometimes burnished (Nedashkovsky L.F. Otchet o razvedochnykh issledovaniyakh v Saratovskom rayone v 1998 godu, p.3, fig.2,*2*, 7,*6-8*, 8-9), were found.

13. The summer cottage of Korol'kova (was situated within the boundaries of modern Saratov – near the streets Vishnevaya and 1 Dachnaya). In 1913-1914 V.S.Vasil'ev found Golden Horde non-glazed pottery here (KZVM, Vol.II, NN 2494, 2639)[7]; in 1914 a silver dirhem: Tokta: Ukek year?-1 was found there (GASO, fund 407, inventory 2, file 243; GASO, fund 407, inventory 2, file 263).

14. Village Severnyy in the Leninsky district of Saratov. The settlement 'Pesochnoe' (it is located on the right bank of the river 1st Guselka, on kitchen gardens 70km to the south from Pesochnyy driveway) was discovered by K.Yu.Morzherin. The size is 150*65 m. More than 50 fragments of the Golden Horde pottery (mainly with ornament as the drawn parallel lines), 2 spindle wares from the walls of vessels were collected, the congestion of ceramic slag (Morzherin K.Yu. Otchet ob issledovaniyakh, p.6, fig.1-3)[8] is noted.

15. The Alekseevskoe hillfort. It is situated on a cape on the right Volga bank on the north-east outskirts of the Volga district of Saratov. The hillfort was studied by investigations and excavations in 1921-1971 (Mironov, 1989, p.107-109; Sinitsyn I.V. Arkheologicheskie raboty, p.8-10), in 1992-1994 it was dug out by O.V.Kocherzhenko. The maximal size of monument, according to the data of 1971 is 90*162 m. Basic layers, and also such fortifications as the shaft and ditch may be attributed to Gorodetskaya culture, they block the partially processed layer of the Bronze Age; the individual materials of the Eneolithic (Kocherzhenko, Slonov; Yudin, p.8; Kocherzhenko O.V. Otchet ob arkheologicheskikh raskopkakh Alekseevskogo gorodishcha (Saratovskaya oblast') v 1992 godu, p.3) were also found. The cultural layer of the Golden Horde period[9] (partially exceeding the limits of the site's fortifications), judging by materials of excavations by P.S.Rykov and T.A.Khlebnikova (Rykov, 1926, p.134; Khlebnikova T.A. Otchet, p.2-4), is up to 35-40 cm in thickness, however on the excavation trench of O.V.Kocherzhenko the materials of the XIIIth - XIVth centuries prevail up to the depth of 75 cm and the individual fragments of the Golden Horde ceramics are met up to the depth of 120 cm (Kocherzhenko O.V. Otchet ob arkheologicheskikh raskopkakh Alekseevskogo gorodishcha (Saratovskaya oblast') v 1992 godu; Kocherzhenko O.V. Otchet ob arkheologicheskikh raskopkakh Alekseevskogo gorodishcha i kurgannoy gruppy). In 1971 at the trench of T.A.Khlebnikova in the Golden Horde layer 5 rims (diameter from 12 up to 18.5 cm) of grey and brown pottery of Old Russian shape were found[10]: 2 of them - with an impurity of beat stone and sand in the paste (fig.83,*9,20*), and 3 - only of sand (fig.83,*8,12,21*), and also 4 fragments of walls (2 of them with linear ornament) and 2 bottoms of brown Old Russian vessels with an impurity of sand[11]; the fragments of Old Russian vessels make 17.5% among all pottery found. In that trench 2 fragments of the cast-iron cauldron of the Golden Horde time and a fragment of pottery with festoon ornament (Khlebnikova T.A. Otchet, p.3-4)[12] were found, being the important dating material, because the manufacture of cast-iron vessels in the Volga region develops not earlier than beginning of the XIVth century and storage jars with festoon ornamentation, according to the materials of the Bolgarskoe site of ancient city, occurred in the middle - second half of the XIVth century (Khlebnikova, 1988, p.79).

16. Sokolovaya mountain in the Volga district of Saratov. In 1928 N.K.Arzyutov collected the Golden Horde pottery[13] there; later on Sokolovaya mountain the copper coin of Khizr was found: the Saray al-Djedid, 762 A.H. (Archives of SOMK. Fund of D.S.Khudyakov).

17. Lermontova street in the Volga district of Saratov. In 1972 during civil works N.I.Shestov found a collection consisting of fragments of kashi majolica and mosaics, kashi ceramics and a fragment of celadon vessel[14]. It is possible, that at this monument (described as 'Saratov') in the first quarter of the XXth century the coins of 1350-66 were found (Ballod, 1923-1, p.97). In 1992 on the Volga bank near the hotel 'Slovakia' (probably on this settlement, nowadays completely built up) a Jochid pul was found: Janibek: Saray al-Djedid, 1350s (with a flower)[15].

18. 700 m to the west from the former village Rokotovka (nowadays inside the limits of Saratov) in 1997 and 1998 we surveyed a settlement with the size of 95*100 m and the area of 0.8 ha (Nedashkovsky L.F. Otchet ob issledovaniyakh zolotoordynskikh pamyatnikov v Saratovskom rayone v 1997 godu, p.6-7; Nedashkovsky L.F. Otchet o razvedochnykh issledovaniyakh v Saratovskom rayone v 1998 godu, p.4). In 1998 cultural layer at least at all square of site was destroyed by earthworks. Taking into account the prevailing location

6 SOMK NN NVSP 30942, 31073-31076, 31077/1-2, SUAK 2738.

7 SOMK NN NVSP 29420-29422, SUAK 2494.

8 SOMK NN NVSP 29192, 29193/1-7.

9 Materials of the XIIIth - XIVth centuries from the monument are mentioned in the reports of expeditions, which made reconnaissance on it (Derevyagin Yu.V. Otchet o nakhodkakh, p.35; Derevyagin Yu.V. Otchet o raskopkakh, p.15). They are presented in the collection of SOMK (NN AO 2649/2, 2712/2, 2760/2, NVSP 29089-29107).

10 The rims of the Old Russian pottery, judging by illustrations, were found also at the excavations of O.V.Kocherzhenko (Kocherzhenko O.V. Otchet ob arkheologicheskikh raskopkakh Alekseevskogo gorodishcha i kurgannoy gruppy, fig.9,*3,6-7,12,19*).

11 SOMK NN NVSP 29092-29096.

12 SOMK N NVSP 29106.

13 SOMK N AO 1018.

14 SOMK NN NVSP 23917-23924.

15 Reported by K.Yu.Morzherin.

of the monument above its environments (the altitude above the Volga level is more than 240m), it is possible to assume the patrol significance of this settlement - from it all modern Saratov can be looked through, it is possible to see the Uvek site of ancient city and even the left bank of Volga. Using the cleaning of denudation of the archaeological layer its thickness was revealed. It is 35 cm. Besides fragments of unglazed Golden Horde pottery, sometimes burnishing and ornamented with drawn parallel lines, and Old Russian one, with wavy ornament, with an impurity of beat stone and sand in the paste, on the monument three Jochid puls of the 1330-s - 1340-s were found: Saray (with lion and sun) - 1, Saray al-Djedid (with double-headed eagle) - 1, Saray al-Djedid (with double-headed eagle?) - 1. Obviously at this settlement in the first half of the 1920-s a copper coin of Uzbek of 730 or 731 A.H. was found (Fyodorov-Davydov, 1963, p.193, N 405; Archives of SOMK, fund 85, inventory 1, file 89, p.179).

19. Boldyrevskoe settlement. It was revealed in 1978; investigated by M.I.Kurakin in 1978-80[16] and by the author in 1994 (Nedashkovsky, 1995-6; Nedashkovsky L.F. Otchet o razvedkakh k yugo-zapadu ot Saratova v 1994 godu, p.2-4). It is situated to the north-west of the village Teplichnyy (former village Boldyrevka, nowadays inside the limits of Zavodskoy district of Saratov). From its border the settlement is located not more than in 20 m. This settlement of the Golden Horde epoch (on the settlement late Russian grey glossy ceramics and fragments of vessels of Bronze Age were found) is extended from the north-west to the south-east; it is situated on the first terrace of the river Uvekovka. The size of the settlement is 210*95 m. The probe trench showed the thickness of an archaeological layer of the Golden Horde period - up to 35-40 cm. The material from the monument is represented mainly by fragments of brown and red unglazed Golden Horde pottery, sometimes ornamented by the drawn parallel lines, festoons and off-prints of pectinate stamp (including the crossed ones). In 1994 in the central part of Boldyrevskoe settlement the rim (fig.83,*23*) and 2 non-ornamented fragments of Old Russian vessel's walls of brown colour with an impurity of beat stone and sand in the paste were found; of the complete pottery of the XIIIth - XIVth centuries, collected then at the settlement, the Old Russian compiles 3.4%.

The settlement is dated using the copper coins (Morzherin, 1997, p.166, 169-170, fig.2,*8*)[17] of Toktamysh period (Saray 787 A.H.-1; Khorezm 790 A.H.-2) and a hoard (see N 129), found in 1983 at a pond 'Pionersky', just near the settlement. The hoard contained 74 silver dirhems, the youngest of them (11 items) were stroked in 761 A.H. (all coins were determined by Yu.E.Pyrsov). The numismatic data allow to limit the period of the settlement existence by the 2nd half of the XIVth century.

20. Uvek I settlement. To the west of the mouth of the river Uvekovka, just near the Uvek site of ancient city in the beginning of the XXth century the finds of building materials and other articles of the Golden Horde time (Ballod, 1923-1, p.72, fig.24) were made.

21. Uvek II settlement. To the west – south-west of the mouth of the river Uvekovka (Ballod, 1923-1, p.72, fig.24).

22. Uvek III settlement. To the south-west of the Uvek site of ancient city (Ballod, 1923-1, p.72, fig.24).

23. Vislovka II. In 1988 S.I.Chetverikov on the area of 50*50 m collected 22 fragments of the Golden Horde pottery (including those with ornament as parallel lines), bloom and slag (Chetverikov S.I. Otchet ob arkheologicheskikh razvedkakh v Lyisogorskom i Saratovskom rayonakh Saratovskoy oblasti, p.4-5, fig.2, 3, 6-8) on the slope of the right-bank first terrace of the river Karamysh, 300-400 m to the south-west of the village Vislovka of Lysogorsky area.

24. Village Bol'shaya Dmitrievka of Lysogorsky area. Between the village and settlement 'Pyatnadtsat Let Oktyabrya' in 1991 A.D.Matyukhin discovered the Golden Horde settlement.

25. Konstantinovskoe settlement, located 300 m to the south-west of the village Konstantinovka of Saratov area, was investigated by S.I.Chetverikov in 1987 and by the author in 1997 (Nedashkovsky L.F. Otchet ob issledovaniyakh zolotoordynskikh pamyatnikov v Saratovskom rayone v 1997 godu, p.7-8). The basic area is turf, not numerous materials are collected only on the road coming through the monument, and in slinks from the rodent burrows. Judging by the distribution of material the size of the settlement was 60*100 m, the area - 0.5 ha. Incorporated in the central part of the settlement probe trench showed the presence of archaeological layer with the thickness of about 30 cm. The material from the monument is represented by unglazed red-clay Golden Horde pottery with the ornament as the horizontal drawn lines and scallops.

26. Kolotov Buerak. The well-turfed Golden Horde settlement was found in 375 m to the north-east of the village Kolotov Buerak in 1996 (Nedashkovsky L.F. Otchet o razvedkakh v Saratovskom rayone v 1996 godu, p.5-7). The sizes of the settlement: 115 m from the north to the south and 240 m from the west to the east; its area is about 2 ha. The elevated material is represented by pottery, including burnished, with ornaments as the drawn parallel lines and single row wave. Similar pottery was found in a probe trench incorporated on a monument. The thickness of the archaeological layer in the probe trench reached 40 cm; in the bottom horizon of the archaeological layer 4 fragments of pottery of the Bronze Age (of the total fragments of ceramics from the probe trench they make 23.5 %) were found.

27. Bagaevskoe settlement. On the left bank of the river Petrovka this settlement of the Golden Horde time was discovered by the author in 1995 (Nedashkovsky, 1996, p.281; Nedashkovsky L.F. Otchet o razvedkakh v yuzhnoy chasti Saratovskogo rayona v 1995 godu, p.7-8). It is situated in 1.6 km to the west – south-west from the village Bagaevka. The sizes of the settlement: 150 m from the north to the south and 420 m from the west to the east; the approximate area of the

[16] Materials collected during these investigations are kept in SOMK (N SMK 35342/A-9).

[17] SOMK N SMK 39933; aN-2.

monument is 3.6 ha. The average thickness of the archaeological layer is 30-40 cm, in some places it reaches 70 cm. The material from the settlement is represented by unglazed Golden Horde pottery, fragments of Old Russian vessels with the diameter of the rim from 11 up to 21 cm - white-clay (fig.83,*33*) and brown (fig.83,*31-32,34-37*) with an impurity in the paste of beat stone with sand (fig.83,*31-33,37*) or only of sand (fig.83,*34-36*), a fragment of kashi bowl with underglaze black painting and red-clay vessel with turquoise glaze.

28. Hmelevskoe II settlement was discovered by us in 1995 on the right bank of the Petrovka in 1.1 km to the north of the village Hmelevka and in 300 m to the east of a highway Saratov – Krasnyy Tekstil'shchik (Nedashkovsky, 1996, p.281; Nedashkovsky L.F. Otchet o razvedkakh v yuzhnoy chasti Saratovskogo rayona v 1995 godu, p.7). The found material of the Bronze Age represented by small fragments of pottery was collected on the settlement with the area of 40*100 m. The Golden Horde pottery is distributed on the area of 40*45 m; by the cleaning of a bank in the Golden Horde part of the monument a poorly sated archaeological layer with the thickness of up to 80 cm was revealed.

29. Hmelevskoe I settlement. It is situated between the rivers Petrovka and Hmelevka to the east – north-east of the village Hmelevka, and partially is built up by summer residences, and also by the village itself. This settlement of the Golden Horde epoch was known from the beginning of the XXth century (Rykov, 1928, p.81; Rykov, 1936, p.122): in SOMK the articles collected on it in 1908 by V.A.Shakhmatov[18] and in 1984-1985 by M.I.Kurakin[19] are kept. In 1995-1997 the settlement was surveyed by us (Nedashkovsky, 1996; Nedashkovsky, 1997-2, p.267; Nedashkovsky L.F. Otchet o razvedkakh v yuzhnoy chasti Saratovskogo rayona v 1995 godu, p.4-5; Nedashkovsky L.F. Otchet o razvedkakh v Saratovskom rayone v 1996 godu, p.3-4; Nedashkovsky L.F. Otchet ob issledovaniyakh zolotoordynskikh pamyatnikov v Saratovskom rayone v 1997 godu, p.9-10; Nedashkovsky L.F. Otchet o razvedochnykh issledovaniyakh v Saratovskom rayone v 1998 godu, p.5-7). The area of the monument is about 65 ha.

The found material from the settlement is represented by typical Golden Horde unglazed pottery, fragments of brown Old Russian pot-like vessels with the diameter of the rim 15.5-17.5 cm with an impurity in the paste of beat stone and sand (fig.83,*15,22,38*), and also only of sand (fig.83,*11*), a fragment of the upper part of Trebizond amphora, a piece of a hollow ceramic sphere with two apertures, fragments of modelled and similar to it crockery, including those of Mordvin shape with an impurity of grog, numerous fragments of kashi and red-clay glazed vessels, a lustre bowl and a celadon vessel with a relief, a fragment of kashi tile, glass beads and fragments of two vessels, a stone ornamented net weight, a whetstone, and ornamented fragment of a talc-chlorite vessel, spindle whorls from walls of ceramic vessels and from limestone, ceramic polisher, iron plough blade, ice-walking calk, buckles and their fragments, a ring from harness, a horseshoe-like syul'gama with a twisted arc and bronze needle, a catch, a fragment of a lock, a key, 7 knives, an axe blade, a clamp, a cramp, nails and other articles, 4 fragments of cast-iron cauldrons,15 ornamented lead plumbs, 2 lead ingots, bronze massive 14-facet bronze gilded eyelet of a cross-enkolpion with green and red enamels (fig.36,*10*), 12 muffs and a knife handle (?) facing, 2 plates, a belt tip, a fingering, a needle from a syul'gama, a thimble, a whetstone facing, a half of a bead (?), fragments of bells, fragments of cast and forged vessels, rivets from them, a part of an unornamented lock in the shape of a cow, a small key, 11 fragments of mirrors, uncertain articles and samples of raw material.

In 1995 and 1997-2001 there were found: dirhems of Uzbek (Mokhsha 721 A.H.-1), Janibek (Saray al-Djedid 743 A.H.-1, 746 A.H.-1), Khizr (Saray al-Djedid year?-1) and puls: Uzbek: Saray 726 A.H.-1, 731 A.H.-1, 737 A.H.-1, year? (with a lion and sun)-17; Mokhsha 726 A.H.-1; Janibek: Saray al-Djedid year? (with a double-headed eagle)-30, year? (with a flower)-31; Mokhsha 743 A.H.-1; Crimea 744 A.H.-1; Khizr: Saray al-Djedid 762 A.H.-4; Gulistan 762 A.H.-15; anonymous coins of the internecine wars period: Gulistan 764 A.H.-4, 766 A.H.-1. Earlier on the settlement copper Golden Horde coins of the XIVth century minted under khans from Uzbek to Toktamysh were found (Fyodorov-Davydov, 1963, p.196, N 421).

A probe trench established on the settlement in 1995 showed the presence of the sated archaeological layer with the thickness up to 70 cm. Besides over 200 fragments of unglazed and 3 fragments of glazed Golden Horde ceramics, pieces of squared brick, cleaved animal bones, slag and bloom, in the probe trench in the bottom horizons of the layer parts of three light brown pottery vessels of Old Russian shape with an impurity of sand in the paste and with the diameter of 14.5 cm (fig.83,*19*) were found, and with the impurity of beat stone with sand, with the diameters of 18 and 23 cm (fig.83,*39-40*). Old Russian fragments constitute 1.3% of the pottery found in the probe trench.

In 1999-2001 the author carried out excavations of Hmelevskoe I settlement: investigations were made on trenches I (1999-2000; total area 168 sq.m.), II (2000, area 32 sq.m.) and III (2001, area 32 sq.m.). The results of analyses of microstructure of iron objects from the excavations are available in Appendix 4[20].

Trench I of rectangular form, which included the probe of 1995, had sizes of 12*14 m and was oriented according to the compass. The trench was divided into square parts with sizes of 2*2 m. The levelling showed that the surface of trench I, situated on ploughed land, has quite significant overfalls (from -44 to +22 cm from the conventional zero).

During the works on the trench three horizons of the cultural layer of the Golden Horde time were distinctly marked out.

[18] SOMK NN NVSP 31238, 31414, 31465/1-2.

[19] SOMK NN NVSP 31557-31562.

[20] The analyses of microstructure of iron objects from our excavations of 1999-2001 were made by lecturer of Ulyanovsk State Pedagogical University Yu.A.Semykin, to whom the author expressed his gratitude.

The first, upper, horizon is a layer of ploughed land of grey colour; its maximum thickness – 67 cm – is noted in the western part of the trench, the minimal – 20 cm – in the central part. The following objects come from the horizon: 723 fragments of Golden Horde unglazed pottery ornamented by horizontal lines, multi-row wave, off-prints of comb-like stamp and festoons, 21 fragments of kashi, 4 fragments of red-clay glazed, 3 fragments of grey-clay stamped earthenware, single fragments of modelled Mordvin and Old Russian ceramics, pieces of clay coating (including that of tandyr) and bricks, stones, animal bones. Among the finds there are: a fragment of a glass vessel, a fragment of a bronze vessel, a piece of a bronze bracelet, an iron cramp and 2 uncertain objects, and also Jochid coins (silver: Uzbek: Bulgar al-Makhrusa 732 A.H.-1; copper: Uzbek: Saray 737 A.H.-1; Janibek: Saray al-Djedid 1340s (with a double-headed eagle)-2; Crimea, 744 A.H.-1).

The second horizon is a grey-black sandy loam with the thickness from 9 (in the eastern part of the trench) to 54 cm (in the southern part). The day levels of pits 1 and 2 are connected with this horizon. Among the small finds in the second layer there were bronze objects: a fragment of a mirror with the image of 4 sitting human figures divided by 4 dragons in a circle (two fragments of this object were found in pit 2 in trench I-1999), a muff of a knife, a fragment of a vessel, a piece of a sheet and a splash of metal; iron objects: a buckle, an armour-piercing arrowhead, 4 knives, a small lock, a key, a cramp, 3 nails, 6 uncertain objects, a ceramic spindle whorl from a vessel wall, and also Golden Horde coins (silver: Tokta: Ukek without date (1306-1308)-1; copper: Uzbek: Saray 731 A.H.-3, 737 A.H.-5; Janibek: Saray al-Djedid 1340-s (with a double-headed eagle)-1, 1350-s (with a flower)-1). The horizon can be preliminarily dated as the 30-s - 40-s of the XIVth century.

The third, lowest, horizon, which, due to the disturbance by later layers is present outside the boundaries of the constructions only in the north-eastern, central and southern parts of the trench, is a light-grey sandy loam with the thickness of up to 30 cm. The day levels of pits 4 and 5 are connected with this horizon, among the finds we should note a pul of Uzbek of Saray mintage of 737 A.H. The horizon can be dated as the first third of the XIVth century, probably, the 20-s – first half of the 30-s of the XIVth century.

In two lower horizons of the cultural layer there were found 2568 fragments of the Golden Horde unglazed pottery, ornamented by scratched lines, multi-row wave, off-prints of a comb-like stamp and festoons; out of 2nd and 3rd horizons come 21 fragments of kashi vessels, 27 fragments of red-clay glazed ceramics, a fragment of a celadon vessel, 5 fragments of stamped, 5 fragments of Old Russian ceramics, fragments of modelled and similar to it earthenware, stones, animal bones, fragments of clay coating (including the tandyr one) and of bricks.

The cultural layer is based on solid brown natural loam.

In trench I 5 pits were opened (2 of them partially exceeded the trench boundaries), 2 of which (pits 2 and 4) can be preliminary attributed as dwellings or large constructions of household purpose (pit 2). In one more pit (pit 5) the remains of a tandyr were examined; two more pits (1 and 3) were household ones. Of great interest is the fact that stratigraphically and planigraphically we managed to reveal the asynchrony of the investigated erections: the tandyr and one of the dwellings (pit 4), destroyed in a fire, are earlier erections, while another dwelling (pit 2) and two pits are later ones (one of them - pit 1 – is synchronic to the dwelling and another - pit 3 – functioned later). All erections have homogeneous filling.

Pit 1 of roundish shape, bell-like in section, was revealed at the depth of -96 cm. At the depth of -112 cm its diameter became smaller. The maximal depth of the pit is -243 cm. In the filling there were pieces of eggshells and small char pieces. At the depth of -155 cm there was a layer of ashes. The mass material from the pit is represented by 212 fragments of the Golden Horde unglazed pottery, 7 fragments of kashi ceramics, 4 fragments of modelled earthenware of Mordvin shape, 11 fragments of Old Russian pottery and 2 fragments of Trebizond amphorae with small grooving and white slip (fig.86,*3-4*), iron slag, fragments of clay coating, stones and animal bones. Small finds are represented by the iron: frame of a small buckle and two uncertain objects; the bronze: part of a mirror with a low rim border and an earring in the shape of an interrogative mark with a wire braiding and a multi-facet metal bead on the end, and also a lead weight-seal.

Pit 2 of a complex 8-like shape was revealed at the depth of -44 cm. The sizes of the investigated part are 334*540 cm. In the south-eastern part of the pit at the depth of -74 cm there was an accumulation of ashes, probably from a fireplace, and in 1 m to the west of it there was an accumulation of stones. The eastern part of the pit was the deepest and probably served as a cellar, bell-like in section, with steps down it; in the filling there were grains of millet, eggshells and an accumulation of fish scales. Along the southern slope of the pit there were small pits, probably being the pole pits or holes of mall rodents. The maximal depth of the eastern part of the pit is -274 cm, of the western part -76 cm. The mass material from the pit is represented by 675 fragments of unglazed Golden Horde pottery, 31 fragments of kashi (fragments of a bowls) and 9 fragments of red clay (including from the Black Sea region) glazed pottery, a fragment of lustre vessel, 1 fragment of modelled earthenware, 8 fragments of Old Russian pottery, a fragment of an amphora (?), iron slag, fragments of clay coating, bricks, stones and animal bones. From the construction come numerous small finds: iron: 6 knives, a frame of a buckle, an arrowhead in the shape of a narrow 'srezen', a small lock, a key with a bifurcated working edge, a syul'gama, a fragment of an axe, an awl and uncertain objects; bronze: a thimble, two fragments of a mirror with 4 sitting human figures divided by 4 dragons and arranged in a circle, a plate bracelet ornamented by four projecting longitudinal stripes, a coin of Uzbek (Saray, 737 A.H.), plates, a half of a kashi button, a ceramic object of uncertain purpose, fragments of glass vessels and a fingerings.

Pit 3 is revealed at the depth of -68 cm. The maximal depth of the construction is -118 cm. The material from the pit is represented by 42 fragments of unglazed Golden Horde

pottery ornamented by festoons, drawn horizontal lines, multi-row wave and crossed print-offs of a comb-like stamps, 4 fragments of Old Russian earthenware, 2 fragments of Trebizond amphorae (fig.86,*2*) with small grooving and white slip, fragments of clay coating. According to stratigraphy, the pit should be dated as the later period than the second horizon and all other structures investigated in the trench. Unfortunately, there were no dating finds in the pit, but stratigraphy and ceramic material allow to preliminarily date it as the second half of the XIVth century.

Pit 4, partly exceeding the boundaries of the trench, is a remain of a large above-the-ground dwelling with the sizes not less than 876*1247 cm. The erection is stretched from east-north-east to west-south-west. In the pit there are accumulations of ceramic vessels, including jugs (fig.87,*1-2*), lanterns, a storage jar and a tuvak (fig.87,*3*), as well as the remains of heating system as charred from the inside flue pipes with the traces of clueing substance on the outer side. In the filling there were numerous coals and burnt fragments of ceramics, which speaks of the destruction of the structure in the fire. In the north-west part of the construction there is a darker filling, there the latest coins of Janibek were found; probably here a later structure of the middle of the XIVth century was intersected an earlier one of the first four decades of the XIVth century. The material is represented by the Golden Horde unglazed pottery (1097 fragments, including a half-finished spindle whorl), 12 fragments of kashi earthenware, 3 fragments of red-clay glazed ceramics, 4 fragments of stamped ceramics, 11 fragments of brown Old Russian pottery, 4 fragments of modelled (including 3 of Mordvin shape) ceramics, a fragment of Trebizond amphora (fig.86,*1*), animal bones (including a knucklebone with three non-through apertures), fragments of clay coating (including the tandyr one), of bricks, stones, slag and individual finds: bronze: a fragment of a mirror with a low rim, a bondage and cuts-off of bronze; iron: round buckle, a fragment of a scythe, 4 knives, a part of a lock, 3 keys, 3 cramps, a nail, a clamp, a plate, a pipe, 5 uncertain objects, 2 fragments of wire, slag, 2 fragments of glass vessels, a cornelian bead, a shale whetstone, 2 ceramic spindle whorl made of vessel walls and Jochid coins (silver: Janibek: Saray al-Djedid 746 A.H.-1; copper: Uzbek: Saray 731 A.H.-3, 737 A.H.-3; Saray (?) 1330-s (with a lion and sun)-1; Saray al-Makhrusa 731 A.H.-1; Janibek: Saray al-Djedid 1340-s (with a double-headed eagle)-1; Bardzhin, 753 A.H.-1).

Pit 5 of under-oval shape (maximal sizes 196*452 cm), changing its shape with depth, was revealed at the depth of -80 cm. The maximal depth is -203 cm. The construction is a remains of tandyr (the eastern part of the pit, faced with sandstone and coated with clay with ornamentation characteristic for the Golden Horde tandyrs) and its furnace chamber (the western part of the pit). In the filling of the construction there were coals. The mass material from the pit is represented by 252 fragments of unglazed Golden Horde pottery (including large vessels - khums), 3 fragments of kashi, 4 fragments of glazed red-clay earthenware, 3 fragments of modelled, a fragment of grey clay stamped ceramics, 10 pieces of iron slag, fragments of clay coating, stones and animal bones. The small finds are: a fragment of bronze mirror; iron: 2 knives, an arrowhead, horse-shoe, a nail and uncertain objects, fragments of cast iron cauldron, a shale whetstone.

The unglazed Golden Horde pottery from trench I (5569 fragments) allows to make some conclusions. For example, it can be stated that non-burnished ceramics (5051 fragments, 90.7% of all unglazed pottery) absolutely prevails over the burnished one (518 fragments, 10.3%). The well-fired ceramics (3255 fragments, 58.4%) does not largely exceed the earthenware of bad firing – with a dark layer in the middle of sherd (2314 fragments, 41.6%), which is apparently connected with the peculiarities of the local (non-city) pottery manufacturing, for which it was not always possible to reach the high level of ceramics firing. As for the colour of the unglazed pottery, the available data allow to conclude that the brown colour prevails (2465 fragments, 44.3%) then go the red (1876 fragments, 33.7%), fulvous (1094 fragments, 19.6%), grey (97 fragments, 1.7%) and yellow (37 fragments, 0.7%).

As for the glazed ceramics, we have found only 12 kashi fragments in early pits 4 and 5, 38 fragments in pits 1 and 2, and red clay glazed ceramics in pits 4 and 5 - 7 fragments, in pits 1 and 2 - 9 fragments.

Of Old Russian pottery there were 11 fragments in pit 4, 19 fragments in pits 1 and 2 and 4 fragments in pit 3. This speaks of the presence of Old Russian component in the monument in the XIVth century.

The finds of a great interest are: in pit 4 – a fragment of a Trebizond amphora, in pits 1 and 2 – 3 fragments of such amphorae, in pit 3 – two more fragments. In pit 2 also fragments of a bowl of the Black Sea origin and a fragment of a Middle East lustre vessel were found. These data, as well as the find of a fragment of lustre ceramics and a coin of Hulaguid Argun (1284-1291) on the ploughed land, speak of the broad southern trade links of Hmelevskoe I settlement during the whole period of its existence, that is the end of the XIIIth - XIVth century.

Trench II of rectangular shape with the sizes of 4*8 m was oriented according to the compass. It consisted of 8 square parts with the sizes of 2*2 m. The levelling showed that the surface of the trench II lowers to the north-east (up to -28 from the conventional zero).

Trench II revealed the presence of a partly washed off by erosion homogeneous cultural layer with the thickness from 12 (in the northern part of the trench) to 27 cm (in the eastern part). In the layer 168 fragments of the Golden Horde unglazed pottery, 2 fragments of kashi and 13 fragments of red clay glazed earthenware, ceramic slag, fragments of clay coating (including that of a tandyr), of bricks, stones, animal bones (tab.7; from the trench bone remains of large and small horned cattle, a horse and birds[21]), iron 2 nails and an uncertain object, 3 fragments of glass vessels (2 of them of modern look).

[21] The general identification of osteological materials of our excavations of 2000-2001 was carried out by the researcher of the National centre of archaeological investigations of the Institute of History of the Tatarstan Academy of Sciences G.Sh.Asylgaraeva, to whom the author expressed his gratitude.

On trench II were partly revealed the remains of a construction deepened into the mainland – pit 1 of under-rectangular shape with the sizes of 322*604 cm, inside which there were two pits of under-oval shape. The filling of pit 1 is light-grey sandy loam. Among the finds, besides 43 fragments of the Golden Horde unglazed pottery, a fragment of kashi earthenware, ceramic slag, fragments of clay coating (including one fragment from tandyr), bricks, stones and animal bones, there are iron objects: a fragment of a lock, 5 nails, rings of a chain, an uncertain object.

Trench III had a rectangular shape and was oriented according to the compass. The sizes of the trench are 4*8 m. It was divided into square parts enumerated as 1 to 8. The levelling showed that the surface of the trench is quite even (the difference is from -6 to +1 from the conventional zero).

In trench III under a light-grey layer of turf there was a grey-black sandy loam. The thickness of the cultural layer of the Golden Horde time is from 25 (in the western part of the trench) to 40 cm (in the north-eastern part). There were no constructions fixed in trench III.

Besides 906 fragments of the Golden Horde unglazed pottery, stones, fragments of bricks, clay coating (including the tandyr one), and animal bones, in the layer there were found 35 fragments of Old Russian ceramics, 5 fragments of kashi vessels, 4 fragments of Mordvin modelled earthenware, 4 fragments of Trebizond amphorae, ceramic slag, an iron fragment of a knife and a socket. Osteological materials (tab.7) are represented by the bones of neat cattle (86 bones of 2 individuals), small cattle (148 bones of 2 individuals), a horse (17 bones of 1 individual) and birds (4 bones).

The unglazed Golden Horde pottery from trench III (906 fragments) allows to make the following preliminary conclusions. Non-burnished ceramics (76.7% of all unglazed pottery) absolutely prevails over the burnished one (23.3%). The number of well-fired ceramics (53.3%) does not largely exceed the number of badly fired earthenware – with a dark layer in the middle of the sherd (46.7%). As for the colour of the unglazed pottery, the brown colour absolutely prevails (78.7%), then go the red (19.8%), grey (1%), and fulvous (0.5%).

The cultural layer is based on the solid brown natural loam

30. Settlement at the village Shiroky Buerak. It is located on the banks of a brook in 475 m to the south of the village; for the first time it was surveyed in 1996 by the author (Nedashkovsky L.F. Otchet o razvedkakh v Saratovskom rayone v 1996 godu, p.6-8). The sizes of the settlement are 285*480 m, the area exceeds 6.8 ha, the thickness of the archaeological layer is more than 60 cm. The central part of the monument is at present ploughed. In the eastern part of the settlement there is a Muslim burial ground (N 89). Besides unglazed and kashi Golden Horde ceramics, a fragment of a Trebizond amphora, not numerous walls of vessels of the Bronze Age and the XVIIth – XVIIIth centuries, slag, fragments of daub, bronze mace-head of the XIIth - XIIIth centuries as the cub with cut off corners, on the monument there were found fragments of various Old Russian brown and grey vessels with the diameters from 15 up to 18.5 cm with impurities in the paste of beat stone and sand (fig.83,*41-42*) and only of sand. The fragments of the rim (fig.83,*41*) and of the bottom of a brown Old Russian pot occurred from the established probe trench; from the general amount of ceramics from the probe trench these fragments make 7.7%. Besides the Golden Horde and Old Russian unglazed ceramics in the probe there were found iron: forged nail, a bloom, 2 fragments of brick, as well as bones of a sheep, a horse and a duck (?).

In 2001 in the central part of the monument trench I was excavated, which included the probe of 1996.

Trench I had a square shape (sizes 6*6 m) and was oriented according to the compass. The trench was divided into square parts with the numeration from 1 to 9. The area of the trench was 36 square metres. The levelling showed that the surface of the trench lowers to the south-southeast (up to –38 from the conventional zero).

During the works on the trench two horizons of the cultural layer of the Golden Horde time were marked out.

The first, upper, horizon is a layer of ploughed land of grey colour; its maximum thickness – 48 cm – is noted in the western part of the trench, the minimal – 33 cm – in the southern part. Among the finds we should mention a copper coin with an aperture – Saray, 726 A.H. (1325-1326) - and an iron object of uncertain purpose.

The second horizon is a light-grey sandy loam with the thickness from 13 (in the southern part of the trench) to 33 cm (in the western part). The day levels of pits 1 and 2 are connected with this horizon. Among the finds there is a fragment of iron object.

In total in the cultural layer were found: 172 fragments of unglazed Golden Horde pottery, 19 fragments of Old Russian vessels, 7 fragments of medieval modelled ceramics of Mordvin shape, 3 fragments of the Bronze Age, a fragment of a Trebizond amphora, fragments of clay coating (including that from tandyr), 2 pieces of iron slag, bricks, stones and animal bones.

The cultural layer is underlain by thick brown natural loam.

In trench 1 two pits, partially exceeding its boarders, were marked. Pit 1 is probably a remain of an industrial construction, connected with iron processing (later used as a rubbish pile), while pit 2 is a remain of a fireplace. Both erections have homogeneous filling.

Pit 1 is of complex shape, with vertical slopes and steps. It was revealed in depth –89 cm. The south-western part of the pit was the deepest (maximal depth is -252 cm); the north-eastern part had middle depth of -197 cm. In the filling there were large coals, fish bones and scales. The sizes of the part of erection investigated in the trench are 262*310 cm. The mass material from the pit is represented by 198 fragments of

unglazed Golden Horde pottery, 79 fragments of Old Russian unglazed earthenware, a fragment of red-clay glazed ceramics of Old Russian appearance[22], 30 fragments of modelled Mordvin pottery, a fragment of a vessel of the Bronze Age, 5 fragments of Trebizond amphorae with small grooving and white slip (fig.88), 14 pieces of iron slag, 49 fragments of clay coating, 2 fragments of brick, 5 pieces of ceramic slag, a quartzite chip, stones and animal bones. Smalll finds are represented by an iron piece of a sickle, a handle of a bucket, a lock and an uncertain object, a copper rim and a fragment of forged vessels, a fragment of a shapeless ingot.

Pit 2 of roundish shape (the sizes of the part investigated in the trench are 48*116 cm) was revealed at the depth of -84 cm. It had ash-coal filling and was the remain of a fireplace deepened into the ground. The maximal depth of the construction is -92 cm. The material from the pit is represented by 2 fragments of brown non-burnished unglazed Golden Horde pottery, a fragment of Old Russian earthenware and a stone.

Osteological materials from trench I are of great interest (tab.7). Among the bones of mammals the bone remains of large horned cattle prevail (184 bones of 3 individuals), then go sheep and goats (100 bones of 4 individuals), pigs (23 bones of 2 individuals), cats (9 bones of 3 individuals), a wolf (7 bones) and a fox (1 bone). Fish bones[23] belong to sturgeon (14 bone remains), sterlet (8 bones of 8 individuals) and carps (3 bones of 2 individuals). Also, 12 bird bones were found. Notable is the presence of pig bones (7% of bones and 14% of mammals individuals) and the absence of horse bones among the kitchen remains; these data, alongside with the significant amount of the finds of Old Russian (99 fragments) and Mordvin (37 fragments) pottery, can be viewed as an additional confirmation of the existence of notable Old Russian and Mordvin components in the population composition of the monument. The finds of the wolf, fox, birds and different fishes bones speak of the population occupation of hunting and fishing (the settlement Shiroky Buerak is situated only 600 m to the west-northwest from the Volga). The presence in the materials from the monument of 7 fragments of Trebizond amphorae testifies to its broad trade links.

The unglazed Golden Horde pottery from trench I on the settlement Shiroky Buerak (372 fragments) allows to make preliminary conclusions. The non-burnished ceramics (82% of all unglazed Golden Horde earthenware) absolutely prevails over the burnished ones (18%). The well-fired pottery (62.6%) significantly prevails over the earthenware of bad firing – with dark layer in the middle part of the fracture (37.4%). As for the colour of unglazed ceramics, the available data allow to conclude that the brown colour absolutely prevails (71.2%) then go the red (26.6%), fulvous (1.6%) and grey (0.6%) colours.

[22] The author thanks the researcher of the department of Slavonic-Russian archaeology of the Institute of Archaeology of the Russian Academy of Sciences V.Yu.Koval', PhD, for his consultation.

[23] Kindly identified by the Head of Department of vertebrae zoology of Kazan State University, professor V.A.Kuznetsov.

31. 'Elansky brook'. The settlement is situated between villages Sosnovka and Mordovo of Krasnoarmeysky area. It was discovered in 1979; in 1980-1981 it was excavated by N.M.Malov. The basic layers of the monument relate to the Aronze Age, the materials of Early Iron Age were found too. The top horizons of archaeological layer relate to the Golden Horde period: the pottery of this time was found up to the depth of 100 cm (Malov N.M. Otchet ob arkheologicheskikh raskopkakh i razvedkakh, p.38-40).

32. The Ahmatskoe hillfort. It is situated on the bank of Volga between villages Ahmat and Mordovo of Krasnoarmeysky area, in 4 km to the north-west of the village Ahmat. For the first time it was examined by S.A.Shcheglov; it was investigated in 1911-1912, 1919, 1930, 1965 and 1968 (Derevyagin, 1965; Mironov, 1989, p.107-108, 111; Shcheglov, 1910, 1912; Derevyagin Yu.V. Otchet ob arkheologicheskikh razvedkakh, p.6-7, fig.8,*1*). Besides materials of the Gorodetskaya culture time (the fortifications of the hillfort relate to the Early Iron Age) and the Bronze Age, the Golden Horde materials were collected at the monument (Derevyagin Yu.V. Otchet ob arkheologicheskikh razvedkakh, p.6-7)[24].

33. Settlement in site 'Martyshkino'. It is situated in 6 km to the south – south-east of the village Ahmat of Krasnoarmeysky area. It was discovered and excavated by the members of SUAK in 1912, then it was surveyed in 1918, 1930, 1965, 1967-1968 and 1984; excavated by V.A.Lopatin in 1992-1996 (Derevyagin, 1967-2; Lopatin, 1994, p.82-84; Lopatin, 1997, p.60-62; Onezorge, p.34-38; Derevyagin Yu.V. Otchet ob arkheologicheskikh razvedkakh, p.7-8, fig.8,*2*; KZVM, Vol.II, N 1914; Lopatin V.A. Otchet ob arkheologicheskikh issledovaniyakh poseleniya 'Martyshkino' v 1992 godu; Lopatin V.A. Otchet ob arkheologicheskikh issledovaniyakh poseleniya Martyshkino v 1993 godu)[25]. The sizes of the settlement were 200 m in length (along the bank of the Volga) and not more than 10-20 m in width. The basic layers of the monument are divided into two layers: the final Bronze Age and the Golden Horde (not numerous fragments of pottery of various cultures from the Neolithic up to Gorodetskaya culture period). 2 excavated by V.A.Lopatin structures and a metallurgical forge found also may be attributed to the Golden Horde period. The thickness of the Golden Horde layer achieves 1.5 m. From the finds of the Golden Horde period, besides pottery (including various and numerous Old Russian), stone mile-stones, iron articles and a silver coin 'probably of the beginning of the XIVth century' were found (Onezorge, p.38). In 100 m to the west of the monument there is a burial ground of the Golden Horde time (N 90).

34. Kondakovo I. It is situated in 3 km to the north-west of the former village Kondakovo of Krasnoarmeysky area. Kondakovo I was found by Yu.V. Derevyagin in 1965; in the 1990s it was investigated by S.I.Chetverikov. The maximal sizes of the monument are 150*180 m; its area is about 2.5 ha. On the settlement the materials of Bronze and the Golden Horde epochs (including lots of iron slags) were found; the

[24] SOMK NN AO 132, 843, 845, NVSP 27830, 30645-30647, 30649.

[25] SOMK NN AO 133, 142, 144-149, 440-441, 844, 1382, 2658.

amount of Old Russian pottery found was only a little less than the amount of the Golden Horde one (Chetverikov, p.157; Derevyagin Yu.V. Otchet ob arkheologicheskikh razvedkakh, p.8-9, fig.8,*3*, 15)[26].

35. Kondakovo II. It is located in 2.5 km to the north-west of the former village Kondakovo. It was discovered in 1965 by Yu.V.Derevyagin[27]; it was investigated by S.I.Chetverikov in the 1990th. The sizes of the settlement are 105*170 m; its area is about 1.8 ha. On the settlement, besides finds of the XIIIth - XIVth centuries (including plenty of iron slags), materials of Srubnaya culture of the Bronze Age (Chetverikov, p.157; Derevyagin Yu.V. Otchet ob arkheologicheskikh razvedkakh, p.9-10, fig.8,*4*, 16) were found. At the settlement Old Russian materials even numerically prevail above the Golden Horde ones (it is a unique case in the group of settlements considered); one bronze medieval Orthodox icon (fig.89) was found also.

36. Kondakovo IV. It is situated in 250 m to the north-west of the settlement Kondakovo III (N 37) on a small cape. The sizes of this Golden Horde monument are 140*110 m; the thickness of archaeological layer is 30 cm (Karta pamyatnikov arkheologii Krasnoarmeyskogo rayona, N 28).

37. Kondakovo III. It is situated in 500 m to the north – north-west of the former village Kondakovo. The sizes of this Golden Horde settlement are 80*20 m; the thickness of archaeological layer is 80 cm (Karta pamyatnikov arkheologii Krasnoarmeyskogo rayona, N 27).

38. Skatovka. In 1925 on a dune in 1 km to the south-east of the village Skatovka (later in the connection with the construction of reservoir the village was transferred) of Rovensky area near a road to the village Privol'noe P.D.Rau discovered the settlement of the Bronze and Golden Horde epochs with the sizes of 100*60 m. Pottery, a splinter of a silicon instrument and a shaft of iron arrowhead were collected (Archives of IIMK, fund 2, 1925, file 160, p.28-29; Archives of IIMK, fund 79, file 17, p.5; Archives of IIMK, fund 79, file 34, p.12). At the settlement a barrow (?) of the XIIIth - XIVth centuries (N 111) was excavated.

39. Chapaevo (Freyzengeym). It is situated in the vicinities of a German colony Freyzengeym (at present Engels area). The Golden Horde settlement was discovered in 1921-1922 on a dune. Both earlier and later materials were found on it (Zaykovsky, 1923, p.20-21).

40. Zaumor'e, village of Engels area. In 1989 S.V.Lyahov revealed to the west of the village at the edge of the left Volga bank the Golden Horde settlement with the sizes of 200*10 m. The following articles were found at the settlement: spindle whorl from a vessel wall, unglazed pottery with wavy ornament, fragments of glazed vessels and iron two-compound bit with additional rings and cheek-pieces (Lyakhov S.V. Otchet, p.25)[28]. On the monument 3 copper Jochid coins were found: Uzbek (?): Saray (with lion and sun?) year?-1; anonymous: Gulistan 764 A.H.-1; not definded-1 (Archives of SOMK. Fund of D.S.Khudyakov).

41. Uzmor'e, village of Engels area. Even at the end of the XIXth – beginning of the XXth century it was known about the Golden Horde settlement situated near to the village and coins and various articles found on it (Dukhovnikov, 1894-3, p.207; Rozaliev, p.122-123). According to the B.V. Zaykovsky's data, coins of 1291-1362 were found there and coins of Uzbek and Janibek periods make 95% of all monetary finds (Ballod, 1923-1, p.97-98; Fyodorov-Davydov, 1963, p.195-196, N 415); in the documents of SUAK only one copper coin found in 1913 is individually described: Uzbek: city? 731 A.H. (KZVM, Vol.II, N 2367). In 1983 this settlement (containing also materials of Srubnaya culture) was surveyed by N.M.Malov (Kocherzhenko, Malov, p.156).

42. Ternovskoe I settlement. Ternovka, village of Engels area. Wracking Golden Horde settlement with the sizes of 30*90 m was discovered in 1980 and inspected in 1981 by I.I.Dryomov. It is situated in 550-600 m to the south of the village at the Volga bank (Dremov I.I. Otchet ob arkheologicheskikh razvedkakh v Saratovskom Levoberezh'e r. Volgi za 1980 g., p.2, fig.1, 4-5; Dremov I.I. Otchet ob arkheologicheskikh razvedkakh v Saratovskom Zavolzh'e v 1981 godu, p.1). The destroying household pits were found and unglazed pottery with ornamentation as parallel lines and a multiple-row wave were collected. Near the monument there is a synchronous burial ground (N 92).

43. Ternovskoe II settlement. On the settlement of Srubnaya culture located in flood-lands in 700 m to the south of the village Podgornoe on the road to the village Ternovka (in 500 m to the north-east of this village). Its sizes are 15*80 m. In 1983 during investigations of O.V.Kocherzhenko the Golden Horde materials were collected; at the probe trench the Golden Horde pottery was found at up to 40 cm depth. Also 2 round pits of the XIIIth - XIVth centuries - with bell-like and lens-like sections - were revealed using the probe trench (Kocherzhenko, Malov, p.156; Kocherzhenko O.V. Otchet ob arkheologicheskikh razvedkakh v Engel'sskom rayone Saratovskoy oblasti v 1983 godu, p.8-10). On this monument or on Ternovskoe I settlement (N 42) a Jochid pul was found: Uzbek (?): Saray (with lion and sun?) year? -1 (Archives of SOMK. Fund of D.S.Khudyakov).

44. Settlement near the village Podgornoe of Engels area; it is situated in 800 m to the north-east of the village (Dremov, 1983, p.145; Kasankin, 1994, p.94-101; Kasankin, 1997-1; Kasankin, 1997-2, p.186; Kocherzhenko, Malov, p.156; Morzherin, 1997, p.166, 169-170, fig.2,*7*; Lopatin V.A. Arkheologicheskie issledovaniya, p.16-26, fig.59-73). The settlement was investigated in 1981 and 1983 by reconnaissances (I.I.Dryomov, N.M.Malov), and in 1987 and 1991-1993 by excavations (V.A.Lopatin, G.I.Kasankin). The sizes of the preserved part are 145 m from the north to the south and 110 m from the west to the east; the southern part of the settlement is built up by summer residences. The thickness of archaeological layer outside the structures is up to 60 cm. Dwelling, industrial and economic constructions

[26] Materials in SOMK: N 2660.

[27] SOMK N 2661.

[28] Collections in SOMK: N NVSP 28885-28886.

were investigated on the settlement. Near this monument there is a synchronous burial ground (N 93). From the found material from the settlement coins of 1291-1320s occurred; in the trenches in 1991-1992 puls of 1330s-1360s were found[29]. Besides very various Golden Horde articles, during the excavation the following items were found: a blue - light-blue stone cross[30], a bronze oval dash-boarded ring with a palm image, a smooth green transparent glass bracelet (fig.82,*B,8*), a cylindrical amber bead and plenty of Old Russian pottery with an impurity in the paste of sand, beat stone and grog (Kasankin, 1994, p.95-96, 99, 101, fig.1,*5,17*, 3,*2,5-6*; Kasankin, 1997-1, p.241; Kasankin, 1997-2, p.185-188, fig.1; Lopatin V.A. Arkheologicheskie issledovaniya, fig.72,*16-22*, 73).

45. Kvasnikovka, village of Engels area. The Golden Horde settlement was situated to the north- north-west of the modern village (nowadays this settlement is completely destroyed by reservoir). On Kvasnikovka settlement at the end of the XIXth - beginning of the XXth century the ruins of brick buildings, finds of kashi majolica or mosaics, unglazed ceramics and Jochid coins were found (Ballod, 1923-1, p.97; Dukhovnikov, 1894-3, p.204-206; Krotkov, Shishkin, 1910-1, p.101-104; Rykov, 1928, p.81; Rykov, 1936, p.122; Fyodorov-Davydov, 1963, p.196-197, N 427) - 3 coins were defined: silver: khan?: Saray al-Djedid year? - 1; copper: Khizr: Saray al-Djedid 762 A.H. - 1; Gulistan 762 A.H. - 1 (Zaykovsky, 1910-2); the thickness of the archaeological layer, according to the data of 1909, was 70 cm. Besides pottery, on the settlement the iron brackets, fishing hooks and other hand-made articles were found (KZVM, Vol.I, N 1050; KZVM, Vol.II, NN 1594-1597, 3441)[31] .

46. Anisovka, village of Engels area. At the end of the XIXth century and in the 1970-s (in the area of railway station Myasokombinat) the Golden Horde materials were found there: burr from sandstone and pottery (Zaykovsky, 1908, p.207)[32]. Finds make it possible to suppose presence of a settlement.

47. Mouth of the river Saratovka. The Golden Horde settlement on the left bank of the river was surveyed by D.G.Barinov; its area is less than 1 ha, the thickness of the archaeological layer is 20-60 cm. Unglazed non-ornamented pottery was collected at the settlement; in the 1950-s - 1970-s the local inhabitants found about 20 coins of 1322-1362 (Barinov D.G. Otchet ob arkheologicheskikh rabotakh v basseyne r. Volgi, p.2).

48. Settlement 'Ivan' on the right bank of the river Saratovka. It was revealed in 1986 by D.G.Barinov. The archaeological layer of the monument is nowadays completely washed off. Besides materials of Srubnaya culture and a coin of the XVIth century, the Golden Horde pottery, two iron spear details and a kalatch-like steel were found on the settlement (Barinov D.G. Otchet ob arkheologicheskikh rabotakh v basseyne r. Volgi, p.5, fig.48,*32-34*).

49. Uchhoz I. On the left bank of Saratovka in 500 m to the west of the settlement Pribrezhnyy (Uchhoz) of Engels area in 1986 a wracking settlement (thickness of archaeological layer was 20 cm it was reserved only on the area of 120 sq.m.) was found. The basic part of materials from it relates to Srubnaya culture. However, the Golden Horde unglazed pottery, a handle of an iron knife and an iron plate (Barinov D.G. Otchet ob arkheologicheskikh rabotakh v basseyne r. Volgi, p.2-3, fig.50,*2-3*) were found. It is possible that from this settlement bronze ornamented cauldron of the XIIIth - XIVth century, found in 1984, occurs (Morzherin, 1997, p.166, 169, fig.1,*9*)[33].

50. Settlement at the farm Shalovo on dune 'Praporsky Bugor'. It is located in the territory between two rivers Gryaznuha and Saratovka; it is known from the beginning of the XXth century (Minaeva, 1929, p.14-15; Rykov, 1928, p.81). Alongside with silicon tools, fragments of vessels of the Bronze Age, the Golden Horde pottery and various articles (Derevyagin, 1967-1; Rykov, 1928, p.59; KZVM, Vol.II, NN 1847, 2936)[34], the rim of an Old Russian vessel was found at the settlement (Poluboyarinova, 1972, p.185; Poluboyarinova, 1978, p.122)[35]. A number of Golden Horde coins of 1280s-1360s were found on the monument (sometimes named as the Saratov fort) (Fyodorov-Davydov, 1963, p.193-194, 196, NN 404, 409, 420)[36]; according to the data of B.V.Zaykovsky 52% of all coins found here were stroked during the reign of khans Uzbek and Janibek (Ballod, 1923-1, p.97-98).

51. Settlement 'Plotina' on the left bank of the Saratovka. The sizes of this Golden Horde monument are 100*35 m. In 1986 the fragments of unglazed Golden Horde pottery with ornamentation as multiple-row wave scallops and prints of cristate stamp were collected here, and 2 fragments of ceramic net weights were collected here, and in 1967 a copper coin of khan Uzbek-time (Barinov D.G. Otchet ob arkheologicheskikh rabotakh v basseyne r. Volgi, p.4) was found.

52. Settlement on site 'Podstepnoe', located on the Volga bank in 1 km to the north-east of the settlement Shumeyka of Engels area. It is known from the beginning of the XXth century; in

[29] Dirhems: Tokta: Saray without date - 1; Uzbek: Mokhsha 726 A.H. - 1; puls: Uzbek: Saray 721(?) A.H. - 1, 731 A.H. - 1, without date (with lion and sun) - 4; Janibek: Saray al-Djedid without date (with double-headed eagle) – 5, 750 A.H. – 1, 752 A.H. – 2, without date (with flower) - 1; Khorezm 749 A.H. – 1, 754 A.H. – 1; Mokhsha 756 A.H. – 1; Khizr: Saray al-Djedid 762 A.H. – 1, 76(?) A.H. – 1; Gulistan 76? A.H. – 1; anonymous coins of the period of internecine wars: Gulistan 764 A.H. – 1; Toktamysh: Saray al-Djedid without date – 1; Orda 785 A.H. – 1 (EKM N 6043, NV 8685/1-20). The information about the finds of the expedition of Saratov State University at this settlement was kindly given by G.I.Kasankin and S.I.Chetverikov.

[30] EKM N 9810. In the publication it is by mistake named 'ceramic' (Kasankin, 1994, p.95, 99, fig.1,*5*).

[31] SOMK NN AO 872, NVSP 30653, 30655-30659.

[32] SOMK NN NVSP 31681-31683.

[33] SOMK N SMK 55276/A-2679.

[34] SOMK NN AO 19, 865, 871, NVSP 13365-13366, 15365-15366, 29418-29419, 29927-29928, 29936, 30983.

[35] SOMK N AO 865.

[36] Several coins have not been previously published. They are: silver: Tokta: Saray al-Makhrusa 710 A.H.-1; copper: Uzbek: Saray 731 A.H.-3, 737 A.H.-1; Saray? year? (with lion and sun)-2; khan?: Orda year?-1 (KZVM, Vol.II, NN 1847, 2366, 2927; SOMK N SMK 36955, aN-1/1-4).

1985-1993 it was investigated by D.G.Barinov, I.I.Dremov and V.G.Mironov (Barinov, 1997-2; Dremov, 1987, p.177; Derevyagin, 1965, p.16-17; Rykov, 1928, p.81; Rykov, 1936, p.122; Barinov D.G. Otchet ob arkheologicheskikh rabotakh v basseyne r. Volgi, p.7-10, fig.39-45; Barinov D.G. Otchet ob arkheologicheskikh rabotakh v Engel'sskom, p.2-5, 8-14, fig.6-9, 36-39, 43-44; KZVM, Vol.II, NN 2077, 2080, 2235, 2254, 2256-2259, 2270, 2492, 2649, 2681; Mironov V.G. Otchet Voskresenskoy arkheologicheskoy ekspeditsii Saratovskogo gosuniversiteta 1989 goda. Chast' 2, p.3-5)[37]. The length of the settlement along the Volga bank makes almost 1900 m; its area is about 25 ha. The thickness of archaeological layer is from 0.3 up to 1.5 m. On this Golden Horde settlement the rests of brick and wooden constructions were found, a number of household pits were investigated, various finds were collected: glazed and unglazed (with ornament as parallel lines, scallops, waves and off-prints of a comb-like stamp; grey-clay crockery and fragments of vessels of the Bronze Age) ceramics, majolica, spindle whorls, net weights, fragments of glass vessels and cast-iron cauldrons, glass and stone beads, various iron articles and blooms, bronze wearing-apparel components, fragments of mirrors etc. The finds of silver and copper coins of the 20-s - first half of the 60-s of the XIVth century are known from the settlement (Fyodorov-Davydov, 1963, p.197, N 440)[38]. According to the data of B.V.Zaykovsky, the coins of Uzbek and Janibek compile 70% of all coins found there (Ballod, 1923-1, p.97). There is information about the finds of fragments of a Roman coin and a cufic dirhem, and also 2 silver coins of Poland (one of them is dated as 1509) and 3 Russian kopecks of the XVIth – XVIIth centuries (Barinov, 1997-2, p.242, 250; Barinov D.G. Otchet ob arkheologicheskikh rabotakh v basseyne r. Volgi, p.10). The following Old Russian articles were found at the monument: a bronze ring with solar sign and rests of greenish enamel on dashboard (fig.82,*B,16*), a cross from dark brown slate (fig.82,*B,24*), a cross with green glaze and a bird-penny whistle with yellow and green glaze (Poluboyarinova, 1972, p.184-185, fig.9,*1-2*; Poluboyarinova, 1978, p.121-122, fig.43,*1-2*); also Old Russian pottery (Barinov, 1997-2, p.243-244, fig.4,*2-15,18-20*; Barinov D.G. Otchet ob arkheologicheskikh rabotakh v basseyne r. Volgi, fig.41,*8,21*) was found.

53. Sovetskoe ('Zimnik', 'Lis'ya Balka'). The settlement is located on the left bank of the river Bol'shoy Karaman in 3 km to the south-east of the village Sovetskoe of Sovetsky area; the maximal sizes of the settlement are 350*2000 m. The settlement was revealed in 1990 by a reconnaissance of I.V.Semenova (Semenova I.V. Otchet, p.10-15, fig.22, 25, 29,*2-7*), though it is possible that this monument was opened even in 1914 by S.A.Shcheglov (KZVM, Vol.II, N 2678; Semenova I.V. Otchet, p.15)[39]. In the 1990-s the settlement was surveyed by D.G.Barinov (Barinov, 1997-1, p.183-185, fig.1). The thickness of archaeological layer is about 40 cm. On the surface there are tens of ditches (dwellings?). In 1990 2 copper Jochid coins were found at the settlement: one of them is not determined, the other relates to the coinage of Saray 726 A.H. (1325-26); other monetary finds were made later. 525 copper and silver coins, stroked in the period from the third quarter of the XIIIth century till the beginning of the 60-s of the XIVth century (among coins of the XIIIth century the copper ones make 80%, and among coins of the XIVth century - 91%) - including: silver: Arig-Buga: Bulgar without date-1; Mengu-Timur: city? 672 A.H.-1; anonymous: Ukek year?-1; copper: anonymous (1266-1312): Ukek without date-2; Uzbek: Saray 721 (?) A.H.-1, 726 (?) A.H.-2, 731 A.H.-1, 737 A.H.-9, year? (with lion and sun) -1; Janibek: Saray al-Djedid year? (with double-headed eagle) -3, year? (with flower) -1; Khizr: Gulistan year? -1[40].

The part of the monument located on the first terrace finished its existence in the beginning of the XIVth century - only the coins, stroked not later than 710 A.H., are found (Barinov, 1997-1, p.183). Red-clay glossy pottery ornamented by parallel lines and waves, parts of iron slag, wastes of bronze casting manufacture, iron and bronze (including cut out from a sheet 'iltakhan') articles and their fragments were collected on the settlement. Also a gold pendant with the image of Jochid tamga (Barinov, 1997-1, p.183-185, fig.1,*3*), similar to the article from the site Gashun-Usta (Kramarovsky, 1994, p.194-195, fig.10, *Nomads of Eurasia*, p.84) was found. Besides finds of the Golden Horde time 2 fragments of vessels of the Bronze Age, early medieval iron horse bit, bronze stirrup, a hoard of early Byzantine coins (9 copper and 1 gold), and also 4 silver Russian coins of the XVIIth century occur from the settlement.

Concerning the laws of the settlements' disposition it is possible to note that they are placed unevenly. Practically all settlements are located on the banks of small and big rivers, the majority of them gravitate to Volga. It is remarkable that only 16 (30.2%) of 53 settlements are located on the left bank of Volga, and 37 others (69.8%) - on the right bank. Probably this fact may be explained by plenty of water sources - rivers, brooks and springs - on the right bank.

Judging by the area occupied by the monuments, it is possible to assume that in the Golden Horde time small (there are 24 of them, they make 45.3% of all revealed settlements), with the area less than 1 ha, and middle-sized (there are 16 of them, 30.2% of all settlements), with the area of 1-7 ha, settlements prevail. There are only 4 (7.6 %) monuments with the large area (more than 7 ha), and one of them, the Uvek site of ancient city (area more than 205 ha) was an undoubtedly big city; the other three settlements - Hmelevskoe I (N 29), Shumeyka (N 52) and Sovetskoe (N 53) have the areas of 165 ha, about 25

[37] SOMK NN AO 860-863, 870, 888, NVSP 22224-22265, 22282-22294, 22309-22312, 30207; EKM N/N NVSP 5916, 5920, EKM 8343.

[38] 61 coins are described separately - silver: Uzbek: Saray 734 A.H.-1; city? 724 A.H.-1; copper: Uzbek: Saray 721 A.H.-2, 726 A.H.-9, 731 A.H.-2, 737 A.H.-13, without date - 3; Saray al-Makhrusa 731 A.H.-1; Saray(?) without date (with lion and sun)-1; Janibek: Saray al-Djedid without date (with double-headed eagle)-9, 752 A.H.-9, 753 A.H.-1, without date (with flower)-1; Khizr: Saray al-Djedid 762 A.H.-6; anonymous coins of the period of internecine wars: Gulistan 764 A.H.-1, 766 A.H.-1 (Barinov, 1997-2, p.249-252, fig.5; KZVM, Vol.II, NN 2077, 2080, 2238, 2270, 2649, 3113; SOMK N NVSP 26114).

[39] SOMK N AO 873, NVSP 31241.

[40] EKM NN NVSP 7713/3, 7714, 7715/9, 7716/10, 7717/1-4; EKM 11024, 11025/5, 11026/6, 11027/1-5/7, 11028/8, 11029/11. Reported by D.G.Barinov. Part of materials from this settlement kept in Saratov State museum of Art, named after A.N.Radishchev.

Table 6. Statistics of unglazed Golden Horde pottery from probe trenches on settlements Konstantinovka (N 25), Kolotov Buerak (N 26), Hmelevskoe I (N 29), Shiroky Buerak (N 30) and from the trench of 1971 on the Alekseevskoe hillfort (N 15).

	red				brown				fulvous				grey				Total
	burnished		non-burnished		burnished		non-burnished		burnished		non-burnished		burnished		non-burnished		
	w/f	b/f	w/f	b/f	w/f	b/f	w/f	b/f	w/f	b/f	w/f	b/f	w/f	b/f	w/f	b/f	
Alekseevskoe hillfort	2	1	13	5	-	2	4	10	-	1	-	1	1	-	1	17	58
Konstantinovka	-	-	-	1	-	-	2	1	-	-	-	-	-	-	-	-	4
Kolotov Buerak	-	-	-	2	2	2	2	2	-	-	1	-	-	-	2	2	15
Hmelevskoe I	14	7	22	20	26	9	49	49	2	-	12	10	-	-	2	-	222
Shiroky Buerak	-	-	3	-	-	-	10	4	-	-	-	5	-	-	1	-	23
Total	16	8	38	28	28	13	67	66	2	1	13	16	1	-	6	19	322

w/f – well fired
b/f – badly fired (a dark layer in the middle of sherd)

ha and about 60 ha accordingly. These settlements, on which the rests of various craft manufactures were found, can be considered as towns.

The thickness of archaeological layer is known for 20 settlements: for 8 settlements (NN 17-18, 24-25, 36, 43, 49, 53) it does not exceed 40 cm, for 9 (NN 4, 26-29, 37, 44-45, 47) it is 40-80 cm, for the last 4 settlements (NN 15, 31, 33, 52) - up to 100-150 cm, and for the Uvek site of ancient city (N 1) - more than 4 m. These data say about a rather short-term existence of the majority of settlements - within several decades.

On 27 of 53 known settlements (50.9%), i.e. more than a half, materials of the previous epochs - the Neolithic (N 33), the Eneolithic (N 15), the Bronze Age (NN 1, 3-5, 10, 15, 19, 26, 28, 30, 31-35, 38, 41, 43, 48-50, 52-53), Gorodetskaya culture period (NN 2, 4-6, 8, 15, 31-33, 39, 52) and early Middle Ages (NN 1, 52-53) were found. On 6 of them (NN 1, 19, 30, 39, 48, 52-53) there are layers of the XVIth - XVIIIth centuries.

The results of statistical processing of the most numerous material from the settlements of Ukek neighbourhood - the unglazed Golden Horde pottery – were obtained by surveys[41] only from five monuments (tab.6): the Alekseevskoe hillfort (materials of T.A.Khlebnikova, 1971) and settlements Konstantinovka, Kolotov Buerak, Hmelevskoe I and Shiroky Buerak (investigated by the author in 1995-1997). However on the basis of this insignificant selection it is possible to make some preliminary conclusions. Thus, for example, it is possible to assert that non-burnished pottery (78.6% of all unglazed ceramics) absolutely prevails above the burnished one (21.4%), and on settlements Konstantinovka and Shiroky Buerak (from all five they are the most removed from Ukek) the burnished pottery in the probe trenches was not found at all. The well-fired ceramics (53.1%) does not significantly surpass crockery of bad firing (46.9%), which is obviously connected with the features of local (not urban) pottery manufacture, for which it was not always possible to achieve high level of ceramics firing. Concerning the colour of unglazed pottery by the available data it is possible to conclude that the brown (54%) colour prevails, then go the red (28%), fulvous (9.9%) and grey (8.1%) colours.

Descriptions of osteological materials from surveys (tab.8) and excavations of 2000-2001 (tab.7) are available only for seven settlements (NN 1, 19, 26-27, 29-30, 52). The material from site 'Podstepnoe' occurs from the probe trench of V.G.Mironov (Mironov V.G. Otchet Voskresenskoy arkheologicheskoy ekspeditsii Saratovskogo gosuniversiteta 1989 goda. Chast' 2, p.5), and osseous rests from other monuments were obtained during our works in 1994-2001[42]. As a whole, osteological material allows to reveal a rather precise picture: between animals used in food most of all small horned cattle bones were found (44.8% of all osseous rests and 33.3 % individuals), then go large horned cattle (42.6% of the rests and 25.8% individuals), horse (4% and 13.6% accordingly), pig (3.2% and 3% accordingly) and, at last, birds (2.8% and 13.6%) bones. Similar picture is fixed for Dzhuketau, Muromsky Gorodok, the Bulgar, Tsarevskoe, Selitrennoe, Azovskoe and Madzharskoe sites of ancient cities, Bilyarskoe III settlement, and a little bit different one - for the Vodyanskoe, Bilyarskoe sites and Urmatskoe settlement (Asylgaraeva, p.10-11; Petrenko, 1976, p.230, 237; Petrenko, 1984, p.134, 168-169; Petrenko, 1988, p.267-271; Petrenko, 1999; Fedorov-Davydov, 1984, p.67; Fyodorov-Davydov, 1984, p.197; Fyodorov-Davydov, 2001, p.229-230).

Sheep were killed in age 2 years and elder (5 individuals), 1 year (2 individuals), 1.5-2 years (1 individual), 6 months (1 individual), large horned cattle – 1.5 year (3 individuals), 2.5-3 years (2 individual), elder than 3 years (1 individual), horses – 7-8 years (2 individuals), pigs – 1-1.5 years (1 individual), elder than 2 years (1 individual).

Judging by the quantity of meat that could be obtained from one individual of various animals[43], in the food of population of Ukek and its regions absolutely prevailed beef, then goes

[41] The results of statistical processing of much more numerous quantities of the unglazed Golden Horde pottery from our excavations of 1999-2001 at Hmelevskoe I and Shiroky Buerak settlements see above in this paragraph (NN 29-30).

[42] The identification of all osteological materials of our surveys was carried out by the leading researcher of the National centre of archaeological investigations of the Institute of History of the Tatarstan Academy of Sciences, professor A.G.Petrenko, to whom the author expressed his gratitude.

Table 7. Definition of animal bones from excavations of the Golden Horde settlements and surveys at them (Numerator is the number of bone remains, denominator is the number of individuals).

	Small horned cattle	Large horned cattle	Horse	Pig	Domestic hen	Grey goose	Black grouse	Grey partridge	Birds (not detected)	Kat	Wolf	Fox	Bear (?)	Marten	Total
Hmelevskoe I, trench II	23/4	3/1	4/1	-	-	-	-	-	2/1	-	-	-	-	-	32/7
Hmelevskoe I, trench III	148/2	86/2	17/1	-	-	1/1	-	2/2	1/1	-	-	-	-	-	255/9
Hmelevskoe I, in general	171/6	89/3	21/2	-	-	1/1	-	2/2	3/2	-	-	-	-	-	287/16
Shiroky Buerak	100/4	184/3	-	23/2	10/1	-	1/1	-	-	9/3	7/1	1/1	1/1	1/1	337/18
Excavations in general	271/10	273/6	21/2	23/2	10/1	1/1	1/1	2/2	3/2	9/3	7/1	1/1	1/1	1/1	624/34
Surveys in general	52/12	34/11	8/7	-	2/1	-	-	-	1/1	-	-	-	-	-	97/32
Total	323/22	307/17	29/9	23/2	12/2	1/1	1/1	2/2	4/3	9/3	7/1	1/1	1/1	1/1	721/66

Table 8. Definition of animal bones from the surveys at the Golden Horde settlements (Numerator is the number of bone remains, denominator is the number of individuals).

	Small horned cattle	Large horned cattle	Horse	Domestic hen	Duck (?)	Total
Uvek site of ancient city	1/1	1/1	-	-	-	2/2
Boldyrevskoe	-	3/2	1/1	-		4/3
Kolotov Buerak	1/1	1/1	-	2/1	-	4/3
Bagaevka	1/1	3/2	-	-	-	4/3
Hmelevskoe I	44/6	25/4	4/3	-	-	73/13
Shiroky Buerak	4/2	-	2/2	-	1/1	7/5
Shumeyka ("Podstepnoe")	1/1	1/1	1/1	-	-	3/3
Total	52/12	34/11	8/7	2/1	1/1	97/32

horse meat, mutton has low importance and significant pork share (which could be connected with the presence of Russian and Mordvin population) was fixed only at one settlement (tab.9). At the same settlement Shiroky Buerak fish bones were found also: sturgeon (14 bone remains), sterlet (8 bones of 8 individuals) and carps (3 bones of 2 individuals).

From the lower unploughed horizon of the cultural and upper horizon of natural layers of trench I on the settlement Shiroky Buerak and of trench III on Hmelevskoe I settlement was taken samples for spore-pollen analysis (see Appendix 5)[44].

From the lower unploughed horizon of the cultural layer and from the filling of revealed constructions of trench I on the settlement Shiroky Buerak 20 samples were taken for palaeobotanical investigations, which were obtained by flotation. From the pre-natural layers of trench III on Hmelevskoe I settlement 6 more samples were taken. The analysis was carried out in the Laboratory of Scientific Methods of the Institute of Archaeology of the Russian Academy of Sciences (see Appendix 6)[45]. The noted by E.Yu.Lebedeva absolute prevalence of millet in the samples (61.3% of all cereals), which exceeds soft wheat (15%), rye (12.4%) and barley (11.3%) taken together, can not be accidental. Grains of millet were found by us on the Hmelevskoe I settlement and in the filling of pit 2 of trench I-1999, which was a household erection of a complex shape of figure 8; the eastern part of the pit, where the grains were found, was the deepest and probably served as a cellar, bell-like in section with steps down.

Medieval authors inform about the cultivation of millet in the Golden Horde. Plano Carpini and William of Rubruck as early as the middle of the XIIIth century pointed at the using of millet as food in the Mongol Empire, out of other cereals mentioning only rice and barley, used for producing drinks (Dzhiovanni del' Plano Karpini, 1957, p.36, 95, 124, 138, 146, 148, 154). Millet, barley, peas and popper are mentioned in a dictionary Codex Cumanicus (beginning of the XIVth century), compiled for the Italians who came to Ulus Jochi (Safargaliev, 1960, p.74). In the geographical work of al-Omari (700-749 A.H. / 1300/01-1348/49) it is said about the agriculture in the Golden Horde: 'they have very little crops,

[43] We use in calculations in tab.9 as a conventional one the weight of meat, which could be obtained from one sheep (about 30 kilograms). From the individual of large horned cattle could be obtained about 10 conventional ones (about 300 kilograms), from horse – about 17.5 conventional ones (about 255 kilograms), from pig – about 1 conventional one (about 30 kilograms). Data about the number of bone remains was used in the calculations.

[44] The author thanks researchers of the Laboratory of Scientific Methods of the Institute of Archaeology of the Russian Academy of Sciences E.A.Spiridonova (senior researcher, Professor, PhD in Geography) and A.S.Aleshinskaya (researcher, PhD in Geography), for the analysis of all spore-pollen samples from the excavations of 2001.

[45] The author thanks E.Yu.Lebedeva, PhD, for the analysis of all palaeo-botanic samples obtained by flotation, from the excavations of 2001.

Table 9. Consuming of different kinds of meat by the Golden Horde population of Ukek and its regions (Numerator – in conventional ones, denominator - in percents).

	mutton	beef	horse meat	pork	Total
Hmelevskoe I	215/13.7	1140/72.7	212.5/13.6	-	1567.5/100
Shiroky Buerak	10/5.2	1840/92.7	17/0.9	23/1.2	1984/100
Other settlements	4/3.6	90/8.1	17/15.3	-	111/100
Total	229/6.4	3070/86	246.5/6.9	23/0.7	3568/100

the least of them are wheat and barley, and beans almost can't be found. Most often the crops of millet are found there; they eat it and, as for wareions of land, it (constitutes their main) food' (Tizengauzen, 1884, p.230). According to al-Omari, wheat, barley, millet of two kinds – it is said about millet (dohn) and 'dzhavers (a kind of millet), similar to a seed of trefoil' (in the later case probably Italian millet is meant, which was found in samples from Shiroky Buerak settlement) – and lentil, were sold in the markets of Saray (Tizengauzen, 1884, p.242). Iosafat Barbaro who lived from 1436 till 1452 in Tana, a Venetian colony in the mouth of Don, in his 'Voyage to Tana' also says about the usage of millet by Horde people as food and as a sacrifice; besides millet he mentions only wheat and oats, which was used as horse food (*Barbaro*, p.142, 146, 149-150). Barbaro gives information about agriculture of nomads who appeared on their fields only during sowing and reaping time, and also supplies quite impressive data on crop capacity: 'Lands are fertile there and give the crop of wheat fifty-fold – and its height is like that of Padua wheat, - and the crop of millet is hundred-fold. Sometimes they get such a plenteous crop, that they leave it in the steppe' (*Barbaro*, p.150). Ambrojo Kontarini, who passed through the Low Volga region in 1476, mentions only rice and dried crusts 'of quite good wheat flour' (*Barbaro*, p.221, see also p.224).

§ 3.2. Sites

54. Hlebnovka of Tatishchevsky area. In 2 km to the south-east of the village on the left bank of the river Staryy Kurdium V.B.Vorob'ev in 1984 opened a settlement of the Bronze Age, on which a fragment of a handle of the Golden Horde vessel (Vorob'ev V.B. Otchet, p.20) was found.

55. On a settlement of the Late Bronze epoch 'Belaya Voda', located in 6 km to the north of the village Idolga of Tatishchevsky area and observed by V.B.Vorob'ev in 1984, on which a fragment of a wall of a Golden Horde storage jar, ornamented by rows of parallel lines, and also a rim of a Golden Horde pottery (Vorob'ev V.B. Otchet, p.7, fig.89,*16*) were found.

56. Village Kuvyka of Tatishchevsky area. On the settlement of the Bronze Age located on the cape of the left bank of the river Idolga in 500 m to the south-west of the village, a fragment of Golden Horde pottery, ornamented by rows of parallel lines (Vorob'ev V.B. Otchet, p.11, fig.87,*12*) was found.

57. Village Estontsy of Tatishchevsky area. In 1.8 km to the north – north-east of the village on the right bank of the river Gryaznuha at the edge of the first flood-lands terrace in 1984 V.B.Vorob'ev opened a settlement of the Bronze Age 'Estontsy-4', on which a fragment of Golden Horde pottery with an ornament as the drawn parallel lines (Vorob'ev V.B. Otchet, p.4-5, fig.85,*11*) was found.

58. Chernyshevskogo Street. During the civil works in Oktyabrsky district of Saratov the Golden Horde unglazed pottery was found[46].

59. Settlement Uleshi inside the limits of Zavodskoy district of Saratov. In 1984 on the Volga bank a kashi bead (Morzherin, 1997, p.166, 169, fig.2,*6*) was found.

60. Aleksandrovskoe site (in the pool of the river Chernikha). This site of the Golden Horde period was discovered by us in 1993 and was surveyed in 1994 (Nedashkovsky, 1994-3, p.144; Nedashkovsky, 1995-6, p.229; Nedashkovsky L.F. Otchet o razvedkakh k yugu - yugo-zapadu ot Saratova v 1993 godu, p.4-5; Nedashkovsky L.F. Otchet o razvedkakh k yugo-zapadu ot Saratova v 1994 godu, p.5-6). It is situated in 700 m to the south-east of the village Aleksandrovka, in 400 m to the south of mill warehouses - hangars of Saratov, in 1125 m from the railway station Aleksandrovka and in 90 m to the north-west of a group of summer houses. On an earth road bordering a forest-plantation, 4 fragments of glossy pottery with an ornament as the drawn horizontal lines and a multiple-row wave, and also a rim of Old Russian vessel (fig.83,*10*) with the diameter of about 16.5 cm with an impurity of fine sand in the paste were picked up.

61. Burkin Buerak. In 300 m to the east – north-east of the village Burkin Buerak of Saratov area in 1996 the author discovered the site represented by two fragments of non-ornamented Golden Horde red-clay pottery (Nedashkovsky, 1997-2, p.267; Nedashkovsky L.F. Otchet o razvedkakh v Saratovskom rayone v 1996 godu, p.4-5).

62. Sel'hoztehnika I. It is located in 270 m to the west of the same settlement of Saratov area. It was revealed by us in 1993 and was surveyed in 1994 (Nedashkovsky, 1994-3, p.145; Nedashkovsky L.F. Otchet o razvedkakh k yugu - yugo-zapadu ot Saratova v 1993 godu, p.5; Nedashkovsky L.F. Otchet o razvedkakh k yugo-zapadu ot Saratova v 1994

[46] Information about this site was given by K.Yu.Morzherin.

godu, p.5). On flood-lands terrace on the small area 4 fragments of pottery were picked up: 2 brown and 2 red (one of them, with light brown slip has burnishing and ornamentation as the drawn horizontal lines). The probe trench at the monument did not confirm the presence of any significant settlement there, though in the probe trench a fragment of red-clay Golden Horde vessel, close to the others from this site, and an elf-bolt were found on the same depth.

63. Sel'hoztehnika II. In 50 m to the west of the outskirts of settlement Sel'hoztehnika in 1993 the author found a small fragment of red pottery with an impurity of fine sand (Nedashkovsky, 1994-3, p.145; Nedashkovsky L.F. Otchet o razvedkakh k yugu - yugo-zapadu ot Saratova v 1993 godu, p.5).

64. Sel'hoztehnika IV. On Sel'hoztehnika II Bronze Age settlement, located in 1 km to the south-east of the settlement, in 1993 we found a fragment of bottom of a grey clay pottery vessel with an impurity of fine sand in the paste. It may be probably related to the Golden Horde period (Nedashkovsky, 1994-3, p.145; Nedashkovsky L.F. Otchet o razvedkakh k yugu - yugo-zapadu ot Saratova v 1993 godu, p.6).

65. Kolotov Buerak. In 800 m to the east – north-east of the village Kolotov Buerak of Saratov area in 1996 the author revealed the site represented by two fragments of burnished unglazed red-clay pottery (Nedashkovsky, 1997-2; Nedashkovsky L.F. Otchet o razvedkakh v Saratovskom rayone v 1996 godu, p.5).

66. Petropavlovka. S.I.Chetverikov in 1987 found fragments of a wall and handle of the Golden Horde pottery (Chetverikov S.I. Otchet ob arkheologicheskikh issledovaniyakh, p.35-36) on the settlement of Srubnaya culture on the first flood-lands terrace of the left bank of the river Karamysh in 900 m to the north-west of central constructions of the village Petropavlovka of Lysogorsky area.

67. Station Karamysh. On the first flood-lands terrace of the left bank of the river Karamysh in 1 km to the north-west of the station at the settlement of the Bronze Age S.I. Chetverikov in 1987 collected 2 fragments of walls and 1 fragment of a handle of the Golden Horde pottery vessels (Chetverikov S.I. Otchet ob arkheologicheskikh issledovaniyakh, p.10, fig.28,*9*).

68. The site Pudovkino was revealed in 1997 in 1.6 km to the south – south-west of the village Pudovkino of Saratov area and in 1.65 km to the north – north-west of the village Eseevka (Nedashkovsky L.F. Otchet ob issledovaniyakh zolotoordynskikh pamyatnikov v Saratovskom rayone v 1997 godu, p.12). Three fragments of the Golden Horde unglazed pottery, two of them with an ornament as drawn parallel lines, were found.

69. In 1992, during the investigations of N.M.Malov at Sosnovka 3 settlement of Gorodetskaya culture, situated in 100 m lower by Volga from the village Sosnovka, was found fragment of red-clay Golden Horde ceramic vessel (Malov N.M. Otchet ob arkheologicheskikh raskopkakh i obsledovanii poseleny mezhdu ss. Mordovoe i Sosnovka, p.8, fig.15,*38*).

70. Ahmatskoe I. In 4 km to the north-west of the village Ahmat of Krasnoarmeysky area in 20 m from the breakage to Volga, a rim of the Golden Horde ceramic vessel and a small bronze gilt plate were found (Karta pamyatnikov arkheologii Krasnoarmeyskogo rayona, N 16).

71. Ahmatskoe II. In 4 km to the south-east of the village 2 fragments of the Golden Horde pottery (Karta pamyatnikov arkheologii Krasnoarmeyskogo rayona, p.21, N 20) were found.

72. Uzmor'e, a village of Engels area. On the southern outskirts of the village on a dune in 1914 B.D.Fyodorov found a fragment of an iron sickle and a copper coin of Uzbek 731 A.H.[47]

73. Shumeyka, a village of Engels area. In 300 m to the north-east of the village on a cape between a ravine and the river Kayukovka in 1986 D.G.Barinov found the Golden Horde pottery (Barinov D.G. Otchet ob arkheologicheskikh rabotakh v basseyne r. Volgi, p.16).

74. Pribrezhnyy I. In 6 km to the east of the settlement Pribrezhnyy (Uchhoz) of Engels area on the right bank of the Saratovka D.G.Barinov in 1986 collected on the ploughed land 5 fragments of the Golden Horde pottery (Barinov D.G. Otchet ob arkheologicheskikh rabotakh v basseyne r. Volgi, p.14).

75. Pribrezhnyy II. In 7 km to the east of the settlement Pribrezhnyy (Uchhoz) on the right bank of Saratovka in 1986 D.G.Barinov collected materials of the Bronze Age, and also a fragment of red Golden Horde pottery and also the fragments of iron articles (Barinov D.G. Otchet ob arkheologicheskikh rabotakh v basseyne r. Volgi, p.14-15).

76. 'Mys'. The site is situated in 2 km to the south – south-east of the village Sovetskoe of Sovetsky area on the left bank of the river Bol'shoy Karaman. It was discovered by I.V.Semenova in 1990 (Semenova I.V. Otchet, p.15-17, fig.26). Besides the pottery of Srubnaya culture and animals' bones, 2 non-ornamented fragments of walls of red-clay Golden Horde pottery vessels were found on the monument.

From 23 known sites, 18 (78.3%) are situated on the right bank of Volga and only 5 (21.7%) - on the left bank. On 9 sites (39.1%) materials of the Bronze Age were also found, and one (4.4%) is situated on the territory of the settlement of Gorodetskaya culture.

§ 3.3. Burial grounds

In this paragraph only non-barrow burials are described. The

[47] SOMK N AO 886.

fixed depth of the sepulchres ranged from 5 up to 166 cm.

77. Chardym. In 1909-1910 A.A.Krotkov, P.N.Shishkin and S.A.Shcheglov on the western outskirts of the village Chardym (nowadays in Voskresensky area) opened 3 of 5 destroying Golden Horde burials (Krotkov, Shishkin, 1910-2; Krotkov, Shcheglov). The hands of skeletons were crossed in the area of pelvis. In burial 1 (on a plank with wooden overlap; orientation to the east) the rests of a leather boots were found. Burial 2 (also with the east orientation) was made in a wooden coffin (without nails); stock[48]: an iron knife and a steel, copper and wooden articles of unclear purpose, rests of a lilac silk cloth and a Jochid dirhem (Uzbek: Saray 717 A.H.). In female burial 3 (on a plank with overlap; western orientation) a bronze earring as an interrogative mark, 2 fragments of a glass bead, iron scissors and a metal mirror with the images of four al-Boraks and a vegetative ornament were found. In the ravine one more Golden Horde bronze mirror occurring from one of the burial places was also found (KZVM, Vol.I, N 1028).

78. Burial on the Tanavskoe hillfort. The Tanavskoe hillfort is situated in Saratov area on the left bank of Guselka slightly upper than its mouth. It is known from the 1920th, and in 1960-1965 it was completely excavated by archaeological expedition of I.V.Sinitsyn (Izotova, Malov, p.96-98, fig.1; Mironov, 1989, p.107, 112). The numerous materials of the Late Bronze Age (including burials) and of Gorodetskaya culture were found on the monument. In the northern part of the hillfort near the bank, the Golden Horde earth burial in a coffin oriented by the head to the south-west was excavated; the hands of the buried person were extended along the body, the head was fixed on the nape (Iskhizov, p.108-109; GASO, fund 3712, inventory 1, file 120, p.59, 104), at the left side of the skull a wooden vessel(?) laid.

79. In the western part of the settlement at the village Pristannoe (N 9) at the bank of Guselka river, Golden Horde Muslim burials without stock were found during earthen works (Nedashkovsky L.F. Otchet o razvedkakh v Saratovskom rayone v 1996 godu, p.3).

80. In 600 m to the east-south-east from 'Kombayn' collective farm (within the boundaries of Saratov) and in 700 m to the west - north-west from the Alekseevskoe hillfort in 1994 A.D.Matyukhin investigated 17 burials with western orientation, in one of them an iron knife was found (Matyukhin A.D. Otchet ob arkheologicheskikh issledovaniyakh v Saratovskom Pravoberezh'e Volgi v 1994 g., p.2-9, fig.1,*4-49*).

81. On the extremity of the cape of the Alekseevskoe hillfort (N 15), at the breakage of the Volga bank in 1925, 1944, 1947, 1992 and 1993 not less then 15 burials with south-west orientation were excavated; at a leg of one skeleton the bottom of the Golden Horde vessel was revealed. It is a unique find in this group of burials (Kocherzhenko, Slonov, p.73; Rykov, 1926, p.95-96, 134; Kocherzhenko O.V. Otchet ob arkheologicheskikh raskopkakh Alekseevskogo gorodishcha (Saratovskaya oblast') v 1992 godu; Sinitsyn I.V. Arkheologicheskie raboty, p.10).

Burials (minimum 5), opened in the first half of the XXth century were made with extended limbs, in coffins. The more detailed information is available about 10 burials investigated in 1992-1993: 1) in a coffin, scull on the right cheek, the left wrist is on the hip, the right wrist is on the chest, 2) in a coffin, with the scull on the left cheek, wrists on the chest, 3) without a coffin, with the scull on the right cheek, the hands are bent in elbows, the elbows are on the stomach, 4) in a coffin, with the scull on the right cheek, wrists are on the pelvis bones, 5) in a coffin, with the scull on the right cheek, the elbows are on the stomach, 6) without a coffin, scull on the right cheek, wrists are on pelvis bones, 7) without a coffin, with the scull on the right cheek, the right wrist is drawn to the right shoulder, the left - on the stomach, 8) without a coffin, above the grave hole there was an overlapping from stone plates, scull on the right cheek, the right wrist is at the right shoulder, the left one is on the stomach, 9) without a coffin, scull on the left cheek, the right wrist is on the pelvis bones, the left is on the chest, 10) without a coffin, scull on the back, the arms stretched.

82. In 70 m to the north-east from Boldyrevskoe settlement (N 19) along the road to the pioneer camp 'Udarnik' there is a burial ground of the Golden Horde period with the sizes 55*225 m. 50 burial places with the head directed to the north-west and west were opened there on the area of 524 sq. m. (Zakharikov, Kasankin, Chetverikov, Otchet). Only in five of them the burial stock was found: item 13 – a bronze ring, item 18 – a gold-cloth, item 35 – a white fabric with embroidery, item 39 – an uncertain article of leather, item 40 – a glass bead; in other burials only the rests of coffins and in some cases also nails from them were found. In the back-fill of some graves coal were observed.

83. Uleshi. It is situated to the north of the former village Knyazevka, nowadays inside the limits of Zavodskoy district of Saratov. In 1904 a burial was revealed here, in which 2 silver coins were found: Mengu-Timur: city? 680 A.H.-1; Tuda-Mengu: city? 681 A.H.-1 (GASO, fund 407, inventory 2, file 652a, p.135).

84. Uveksky II. On the Volga bank on the territory of the Uvek site of ancient city (N 1) slightly higher than the station Uvek in 1919 F.V.Ballod studied a number of washed off stockless burials in coffins with western orientation; the hands of skeletons were extended along the bodies (Ballod, 1923-1, p.73). Probably, there in 1891 during the investigation of a brick building (mausoleum with the size of 4*4 sazhen) 7 burials in two crypts with southern orientation (with the faces upwards, one of the skeletons is in a half-sedentary position) and ceramic vessels with the rests of food near skulls (*Raskopki v Saratovskoy gubernii*, p.100; Archives of IIMK, fund 1, 1891, file 30, p.8-11) were opened. Near the area investigated by F.V.Ballod, in 1892-1893 several burials were found, including 2 in crypts (Dukhovnikov, 1893; Kedrov, p.305; Medoks, 1892, p.643-646; *Proizvodstvo arkheologicheskikh raskopok. Saratovskaya guberniya*, p.28); one of the crypts (their height exceeded 1 m) contained a burial in a wooden coffin with silk clothes (*Nakhodki na*

[48] Materials from the grave were partly preserved in SOMK: NN SMK 30830-30832 (AO 504/2-3,5).

Uveke, p.451).

85. Uveksky I. It is situated on the territory of the Uvek site of ancient city (N 1) to the north-east of the station Neftyanaya. It is known from the first half of the XIXth century: G.S.Sablukov described the burials in brick and stone crypts, with the brick pavement on the surface, with northern and southern orientations (Sablukov, 1884, p.307-309, 322). Probably, there in 1891 during the excavations of one of multiple-room buildings with underground heating system and the total area up to 50 sq. sazhen, 21 burials with the northern orientation (according to S.S.Krasnodubrovsky) and skulls of horses or cows were revealed; in one complex there was also a ceramic vessel (*Raskopki v Saratovskoy gubernii*, p.100; Archives of IIMK, fund 1, 1891, file 30, p.8-11). According to the data of F.V.Dukhovnikov (Archives of IIMK, fund 1, 1895, file 122, p.11-12) the skeletons in the building laid in disorder, that seems plausible in view of building heating. There we probably deal with 'the bed of honour' made in an extreme situation, maybe during the destruction of the city by Timur in 1395. In 1893 the burial ground partially was destroyed during the construction of the railway (Dukhovnikov, 1893; *Proizvodstvo arkheologicheskikh raskopok. Saratovskaya guberniya*, p.28-29). In 1907 2 burials (one of them in a crypt) in wooden coffins (*Redchaishiy pamyatnik*) were opened. In 1908 in the territory of petroleum warehouses of 'Nobel' company the rests of two burials in coffins with southern orientation were found (GASO, fund 407, inventory 2, file 985, p.90; KZVM, Vol.I, N 711). Then the rests of a leather boots found in this burial ground were given to the museum of SUAK (GASO, fund 407, inventory 2, file 985, p.97; KZVM, Vol.I, p.292, N 774). S.A.Shcheglov revealed the rests of two burials, oriented with the heads to the west and with the faces to the south, with things (silver earrings, glass beads, copper adornment, a spindle whorl from a vessel wall) and leather footwear (GASO, fund 407, inventory 2, file 184, p.28-29; KZVM, Vol.I, p.424-426, NN 1151-1158); besides these burial places in 1910-1912 at petroleum warehouses during earthworks 11 skeletons were revealed (GASO, fund 407, inventory 2, file 188, p.11; KZVM, Vol.I, p.446, NN 1357-1358; KZVM, Vol.II, p.33, N 1772), one of them had the north-west orientation, the hands of the buried person were extended along the body (GASO, fund 407, inventory 2, file 975, p.29).

In 1913 under the supervision of P.N.Shishkin a brick mausoleum of the first half of the XIVth century was excavated the monument. The mausoleum in the plan represented a rectangular with the sides of 10 and almost 6 sazhen; the total area of the building was a little less than 60 sq. sazhen. The brick mausoleum was erected on the strong base. The structure had two rooms with the area of 13.3 and 11.2 sq. sazhen, shared by a wall with a door aperture laying on one line with two entrances to the building - on the part of each room (Krotkov, 1915, p.112-113). It is possible that the mausoleum was decorated on corners with decorative pinnacles; the building was made of majolica dale and small glazed bricks (Krotkov, 1915, p.113-114).

9 burials were revealed in the mausoleum: 2 - in the south-east room and 7 - in the north-west one; from them 6 burials were in crypts and 3 without a crypt. All buried were oriented with the head to the north-east, parallel to the smaller sides of the building. In the burials numerous articles, among which there were gold and silver ornaments, silver and wooden crockery, rests of silk clothes were found. Among other burials the burial N 1, belonging, in the opinion of A.A.Krotkov, to one of Tokta's wives, is the richest (Krotkov, 1915, p.127-131).

L.T.Yablonsky notes the similarity of the Uvek mausoleum, by architecture and decoration, with classical Muslim mausoleums of Central Asia (Gerasimova, Rud', Yablonsky, p.150, 158); the same author believes that judging by the funeral ceremony and stock, the burials in the mausoleum belonged to Mongolian aristocracy (Yablonsky, 1975, p.79-80).

In 1913 in the north-west corner of petroleum warehouses 7 burials with north-west orientation were investigated (GASO, fund 407, inventory 2, file 975, p.29-30): in 4 cases wooden mats were observed, and one of the buried persons was buried in a woodblock (the right wrist laid on the pelvis bones, the left hand was extended along the body, as well as the hands of other people buried), the head of one of the buried people laid on the right cheek, of another - on the nape (for others data are not available).

In 1913 the engineer Ueysky autocratically opened a crypt containing a burial in a coffin with a silver vessel and with the rests of a silk cloth in it (Krotkov, 1915, p.126-127; GASO, fund 407, inventory 2, file 242, p.98, N 261; GASO, fund 407, inventory 2, file 244, p.26; KZVM, Vol.II, N 2429).

In 1919 F.V.Ballod excavated, close to the investigated in 1913 mausoleum, three crypts with brick paving above them - two with adult burials in coffins with iron nails (northern orientation) and one with a child's one (north-east orientation) (Ballod, 1923-1, p.75-77; Garustovich, Rakushin, Yaminov, p.102-103, tab.VII,*2-6,9-10,12*). One of the adult burials (male) contained a bronze ring and a clasp from a weaved belt (fig.33,*1,6*) and also rests of a boots; in another one (female) the following articles were found: a gold amulet, an earring as an interrogative mark, a filigree locket and a bead, and also a plate, a cornelian hexahedral bead, three light-blue glass beads, a peace of a bronze chain, an iron ring and parts of scissors, fragments of a wooden vessel and a bronze mirror, peaces of brocaded and silk fabrics, parts of bokka cap.

In 1923 P.N.Shishkin opened a brick building of 1919, in which two crypts with burials in coffins oriented by heads to the north-east were revealed. In one of them the rich burial place of a child (hands along the body, skull on the nape) in brocaded and silk caftans, leather footwear with a wooden spoon and plate, a gold earrings as an interrogative mark, a wooden cane, iron and osseous articles was investigated. The second burial contained the rests of bokka (GASO, fund 407, inventory 2, file 980).

86. Hmelevsky II. On the north-west outskirts of Hmelevskoe

I settlements (N 29) at the edge of a ravine close to the river Petrovka in 1995 we excavated two half-destroyed male[49] Muslim burials, situated in 9 m from one another: one of them (as 275) in a coffin, another (as 280) - with the rests of mats and wooden overlapping (Nedashkovsky, 1996, p.281; Nedashkovsky L.F. Otchet o razvedkakh v yuzhnoy chasti Saratovskogo rayona v 1995 godu, p.5, 7). During the excavations of burials outside of sepulchres the fine fragments of the Golden Horde pottery related to the layer of the settlement were found. These burials obviously are part of the burial ground, which proves to be true according to the finds of fine fragments of human bones in the neighbouring parts of the ploughed land.

87. In the territory, close to Hmelevsky I settlement (N 29), during the inspection of a household trench in 1997 we found Hmelevsky III burial ground (Nedashkovsky L.F. Otchet ob issledovaniyakh zolotoordynskikh pamyatnikov v Saratovskom rayone v 1997 godu, p.10-12). During the cleaning of trench walls it was possible to reveal outlines of six graves. 2 partially destroyed burials with wooden overlapping were excavated. One of the buried persons (male? 45-50 years old) was buried with a small turn to the right side in an alcove, the entrance to which was closed with planking about 2 cm thick (burial 1), and another one (a child, 8-9 years old) - in a hole with steps (burial 2). In the filling of the first grave (as 285) a fragment of the Golden Horde pottery, ornamented by the drawn parallel lines was found, and in the back-fill of the second one (as 300) an iron nail was revealed.

88. Hmelevsky I. In 1898 during the earthwork in the manor of V.A.Shakhmatov in the central part of Hmelevskoe I settlement (N 29) numerous burials with eastern and western orientation were found (Shakhmatov). In one of the burial places the following items were found: a bottom of a ceramic vessel and a copper lid, and in the other one – a necklace from 10 colour glass beads: ridge and oval in section[50].

89. In the eastern part of the settlement Shiroky Buerak (N 30) in 1996 we found a Muslim burial ground (partially destroyed by recent earthworks), on which one destroyed burial was opened (Nedashkovsky, 1997-2, p.268; Nedashkovsky L.F. Otchet o razvedkakh v Saratovskom rayone v 1996 godu, p.8, fig.13,*3*, 28).

90. Near a settlement on the site 'Martyshkino' in 1912 the Golden Horde burials in coffins with northern orientation (hands of the buried were extended along the bodies) and without stock (Onezorge, p.35-36) were revealed. In 1994 the researches of this burial ground, situated in 100 m to the west of the settlement (N 33), were continued by K.Yu. Morzherin (Morzherin, 1996, p.62-63; Morzherin K.Yu. Otchet ob okhrannykh raskopkakh gruntovogo mogil'nika v urochishche 'Martyshkino'). In 1994 at the edge of the terrace on the area of 48 sq.m. 19 stockless burials were opened (among them 5 male, 4 female, 2 children's and 8 uncertain) in coffins with south-west orientation; the hands of the buried were settled down in the area of the pelvis or on the chest. In the filling of grave pits of burials N 6 and N 16-18 coals were found. In one of the burials (N 14) under the elbow joint an iron arrowhead as a narrow extended scoop was found, and in two others (N 16, 18) – the remains of leather footwear.

91. Burial ground Nizhnyaya Studenka-I is situated in 9 km to the north-east from the village Revino of Krasnoarmeysky area, on the cape of high terrace of the right bank of the Volga. In 1993 on a monument S.I.Chetverikov burst 26 burials (some of them - with the mat and overlapping from planking, some burials were in coffins) in simple rectangular graves; almost all children burials (only 8 of them were found) were made at a level of natural. All buried laid extended on the back with the heads to the south-west; graves settled down in rows extended in the direction south-west – north-east. The stock is represented by a bead from a dark blue glass, fragment of silver earring with filigree bead as bend, rests of leather footwear and fragment of a wall of the Golden Horde pottery vessel; the fragments of red Golden Horde pottery and grey Russian ceramics were found also in talus of a coast at the burial ground (Chetverikov, p.157).

92. In 400 m to the south from the village Ternovka, in 150-200 m to the north from Ternovskoe I settlement I.I.Dremov discovered in 1980 and surveyed in 1981 washed burial ground of XIII-XIV centuries with the sizes about 30*70 m; in one of destroyed burials the fragment of the Golden Horde pottery was found (Dremov I.I. Otchet ob arkheologicheskikh razvedkakh v Saratovskom Levoberezh'e r. Volgi za 1980 g., p.1, fig.1, 4-5; Dremov I.I. Otchet ob arkheologicheskikh razvedkakh v Saratovskom Zavolzh'e v 1981 godu).

93. Near the settlement at the village Podgornoe (N 44) in 1981 wracking burial ground of the Golden Horde period (Dremov, 1983, p.145) was found. In 1993 in 100 m to the north – north-east from a settlement 6 burials with western and south-west orientation were revealed; in 3 of them the rests of spreading and overlapping boards were found, in one - fragments of a leather from footwear (Chetverikov, p.157-158).

94. In 1985-1986 on the settlement in the site 'Podstepnoe' (N 52) burial ground was found and one stockless burial was burst (Dremov, 1987, p.177; Barinov D.G. Otchet ob arkheologicheskikh rabotakh v basseyne r. Volgi, p.7-10). Earlier on the settlement the brick crypts (Fyodorov-Davydov, 1966-1, p.494; Fyodorov-Davydov, 1966-2, p.205) were marked. In 1989-1993 D.G.Barinov burst 14 burials with the north-west orientation (in one case the hand are extended along a body, in others carpal of hands are combined in the field of pelvis): the graves of 4 burials have batters along long walls, in 2 cases the coffins were observed, and in other 2 - wood perish from overlapping, also in 2 skulls of burial persons are on a nape (in others - on the right cheek), 2 burials had brick grave monuments (Barinov, 1997-2, p.243-244). From burials, open by D.G.Barinov, in two there were earrings

[49] The age of the buried people was 30-35 and 40-45. Determination of the anthropological materials of II and III Hmelevsky burial grounds (Appendix 7) was done by I.R.Gazimzyanov, PhD (researcher of the National centre of archaeological investigations of the Institute of History of the Tatarstan Academy of Sciences). The grateful thanks are expressed to him.

[50] From all the found beads 8 are kept in SOMK: N SMK 52003 (AO 817).

in the form of an interrogative mark, in one - the traces of a black fabric with gold strings found out, other burials were stockless.

Let's analyse in general the data on 209 burials (if quantity of burials was not specified by the researchers, the minimal possible number was taken into account) with known orientation from burial ground of the territory examined. At the heart of typological description of burials there is orientation, inside the types the variants are allocated: depending on presence of burial stock, coffin (mats and overlapping), brick crypt, brick grave monuments on a surface, mausoleum, from a design of grave hole (alcove and beads were allocated; in other cases of the burials were made in simple holes). All combinations of the specified attributes were taken into account. If there are data on the placement of a skull and limbs, it is stipulated inside the variants.

Type 1 (40 burials). With the head to the west. In 22 cases faces of buried were oriented to the south, in 4 cases – to the north, in two cases the head lay on the nape (for the other burials no data are available).

Variant A (23 burials). Without coffins and stock. In 4 cases the hands are situated on chest, in two cases – on pelvis, in two cases – the left hand on pelvis and the right hand on chest, in two more cases – the right hand on a shoulder, the left arm stretched, in one case the left arm stretched, the right hand near the left elbow, in one more case – the right arm stretched, the left hand on pelvis.

Variant B (4 burials). Without coffins, but with stock. In one of the burial hands were on pelvis.

Variant C (11 burials). In coffins (in five cases there are mats or overlapping), but without stock. In one case the right arm is stretched, and the left hand is on a pelvis; in one also the right hand is on a pelvis, the left hand on a shoulder.

Variant D (1 burial). With overlapping and with stock. The right arm is stretched, the left hand is on the elbow joint of the right arm.

Variant E (1 burial). In alcove in the southern wall of the grave, with overlapping without stock; limbs are stretched.

Type 2 (64 burials). With a head to the south-west.

Variant A (14 burials). Without coffins and without stock. In one burial the skull laid on the left cheek, in one more – on the nape, in others - on the right. In two cases hands laid on pelvis bones, for others the various variants were observed. Above one grave the overlapping from stone plates was revealed.

Variant B (2 burials). Without coffins with stock.

Variant C (40 burials). In coffins (in 9 cases there were mats and overlapping) without stock. In 4 cases arms of the buried were stretched along a body, in others the various kinds of hands disposition (on pelvis bones, on bosom) were observed. In three burials the skull laid on the left cheek, in four others - on the right, in two cases – on the nape (for others the data are not available).

Variant D (8 burials). In coffins (in 2 cases there were mats and overlapping), with stock. In five cases the arms are stretched along a body; in two cases – with hands on pelvis bones; in two burials the head is on a nape, in one – on the right cheek, in one – on the left cheek.

Type 3 (11 burials). With a head to the south.

Variant C (2 burials). In coffins without stock.

Variant M (2 burials). In crypts with the brick settings on a surface, without coffins and without stock.

Variant Q (7 burials). In a mausoleum, in crypts without brick pavement on a surface, without coffins but with stock. With the face upwards; one of the buried people was buried in a half-sedentary position.

Type 4 (6 burials). With a head to the east.

Variant A (1 burial). Without a coffin and without stock.

Variant B (1 burial). Without a coffin but with stock.

Variant C (1 burial). In a coffin but without stock.

Variant D (2 burials). In coffins (in one case there are mats and overlapping) with stock; hands are on pelvis bones.

Variant L (1 burial). In a crypt, without brick pavement on a surface, in a coffin and with stock.

Type 5 (12 burials). With a head to the north-east.

Variant M (1 burial). In a crypt with brick pavement on a surface, without a coffin and without stock.

Variant N (1 burial). In mausoleum, without a crypt, without a coffin and without stock.

Variant O (1 burial). In mausoleum, without a crypt, without a coffin but with stock.

Variant P (1 burial). In mausoleum, without a crypt, in a coffin, with stock, limbs are stretched.

Variant Q (1 burial). In mausoleum, in a crypt without brick pavement on a surface, without a coffin and with stock.

Variant R (3 burials). In mausoleums, in crypts without the brick pavement on a surface in coffins and with stock; with the face upwards.

Variant S (4 burials). In mausoleum, in crypts with brick paving on a surface and with stock. In 3 of these burials the rests of coffins were found, in one there was a mat. In two cases the head of the buried person laid on a nape, in the third

on the right cheek, and in the fourth the buried person was in a sedentary position.

Type 6 (7 burials). With a head to the north.

Variant C (3 burials). In coffins without stock; arms along a body.

Variant L (2 burials). In crypts, without brick pavement on a surface, in coffins and with stock.

Variant M (2 burials). In crypts with brick paving on a surface, without coffins and without stock.

Type 7 (69 burials). With a head to the north-west.

Variant A (18 burials). Without coffins and without stock. In three cases arms are along a body, in nine – hands are on pelvis bones; in one burial the right arm was stretched, and the left hand was on pelvis bones, in the other the hands laid to the right of the chest, in the third the right hand was on bosom, and the left - on pelvis bones, in the fourth the right hand laid on bosom, the left arm was stretched, in the fifth hands were on bosom. In ten burials the skull laid on the right cheek, in two - on the left cheek, in two - on a nape.

Variant B (2 burials). Without coffins but with stock. Hands were on pelvis bones; in one case the skull laid on the right cheek, in the other - on a nape.

Variant C (25 burials). In coffins (in one case there was a woodblock, in nineteen – mats and overlapping) without stock. In eight cases arms were stretched along a body (in two of them one hand laid on pelvis bones), in four cases both hands were on pelvis bones; in two burials arms were bent in elbows, and the hands settled down at the mandible, in another the hands laid to the right of chest. In five burials the right arm was stretched, and the left hand was on elbow joint of the right arm; in two burials the right hand laid on bosom, and the left - on pelvis bones, in two others both hands were on bosom. In 15 cases the skull was turned to the south-west with its face, in another one – to the north-east, and in one it laid on a nape (for other burials no data available).

Variant D (3 burials). In coffins (in one case there was overlapping) with stock. A skull in two burials laid on the right cheek, in one - on a nape. In one case the right hand was on bosom, the left - at the elbow of the right arm, in the other the right hand laid on bosom, the left - on pelvis bones, in the third both hands were on pelvis bones.

Variant E (3 burials). In alcove in the south-west wall of the grave, with overlapping (in one case complemented with a mat), without stock. The right arm is stretched, the left hand was on pelvis bones; the skull is turned to the south-west.

Variant F (2 burials). In holes with batters along the long sides, without coffins and without stock. A skull was on the right cheek, hands were in the area of pelvis.

Variant G (12 burials). In holes with batters along the long sides, in coffins (in four cases there were overlappings, in one - mat and overlapping), without stock. A skull in ten burials was turned to the south-west, in one – to the north-east, and in one laid on a nape. Hands in one case were in the area of pelvis, in the other the right arm was stretched, and the left hand laid at the right elbow, in the third case the right hand was on bosom, of the left - on a pelvis, in the fourth the right hand laid to the right of the chest, and the left - at elbow joint of the right arm, in the fifth the left hand was on the elbow joint of the right arm, and the right hand - on the elbow joint of the left arm, in the sixth case the left arm was stretched, the right hand - on a pelvis, in the seventh hands were at the face on the right, in the eighth the right hand was on a right shoulder, the left - on pelvis bones; in two burials the right arm was stretched, the left hand was on a pelvis, and in two cases the hands laid on bosom.

Variant H (1 burial). In a grave with batters along the long side, in a coffin, with stock. A skull was on the right cheek, hands were on the bosom.

Variant I (1 burial). In a grave with steps, with overlapping, without stock.

Variant J (1 burial). In a grave with a batter along the long wall, with brick grave monument, in a coffin, without stock; hands were along a body, skull was on a nape.

Variant K (1 burial). In a grave, with batters along the long walls, with brick monument, with a coffin and stock; a skull was on the right cheek, hands were in the area of bosom.

In our selection there were 7 versions of burial orientation: north-west (33%), south-west (30.6%), western (19.1%), north-east (5.7%), south (5.3%), north (3.4%) and east (2.9%).

In the considered material the crypts were revealed only at 23 burials, located only on the Uvek site of ancient city (the crypts were found also on burial ground in site ‘Podstepnoe’, but no data about them is available). Fifteen of these burials settled down in mausoleums; brick pavements (9) were only in burials in crypts. From burials in crypts 9 have north-east orientation, 9 south, 4 north and 1 east. From burials revealed in the mausoleum investigated in 1913, 3 were without a crypt, but with north-east orientation. All the listed 26 burials (12.4% from the total quantity) in mausoleums or in crypts, can be attributed to the burials of the Golden Horde aristocracy, and in 16 cases, judging by the north or north-east (with this orientation burials outside of crypts or mausoleums were not found at all) orientation of the buried, we can assume also the Central Asian (Mongolian) origin of the people buried (see Yablonsky, 1975, p.79-80, 84).

For the burial grounds examined the north-west (which may be considered as deviation from west), west and south-west orientations of burial persons were spread. They make together 82.7% of all burials. Such orientation is common for major urban Muslim population of the Golden Horde (Yablonsky, 1975, p.79, 81-83). In 108 of 173 such burials the coffins were found, stock was revealed only in 19.

The burial places without crypts with east (5), north (3) and south (2) orientation make together 4.8% of all burials. These types of burials testify about the non stable burial ceremony.

9 burials are male, 7 are female, 24 - children and adolescent (the data are available only for 40 complexes).

Burial stock in the examined territory was found only in 45 burials (21.5% from the total number), 22 from which was revealed on I-II Uvek burial grounds, and 23 - on other monuments (though Uvek materials made less than a half of all considered burial complexes).

The gold and silver decorations were found on necropolis of the Golden Horde Ukek (in 9 burials) and on burial grounds of the Nizhnyaya Studenka I and Podstepnoe (in 1 burial of each of them): in 4 complexes - only gold, in 2 - gold and silver and in 5 - only silver. These 11 burial places with gold or silver articles make 5.3% from the total number of burial complexes. It is remarkable that silver decorations were found only three times in burials made neither in mausoleums nor in crypts and with west, south-west or north-west orientation (in other cases orientation was north-east or north).

There is a similar situation with brocaded and silk fabrics: from 8 burials (3.8%) having these fabrics, 6 were investigated on the Uvek site of ancient city (all in mausoleums or crypts with north-east and northern orientations).

Bokka is marked only on the Uvek site of ancient city in 3 cases (1.4%) - in 2 mausoleums and in crypts with north-east and northern orientations.

Coins were found in 3 burials - on different burial grounds (NN 77, 83, 85); only silver dirhems of 680, 681, 715 and 717 A.H. were found.

From 18 known burial grounds only 3 (16.7%) are situated on the left bank of the Volga, and 15 (83.3%) - on the right bank, where most settlements were situated. One of burials (N 78) was made on the settlement of Bronze Age and of Gorodetskaya culture period.

§ 3.4. Barrows

In this paragraph barrows and barrow groups with the Golden Horde graves are described and also barrows (usually, not excavated) with articles of the XIIIth - XIVth centuries found in mound. It is obvious, that not all monuments of the last group contain the Golden Horde burials. This was shown by the researches of 1989 of barrow 1 at the village Dvoenka (N 103) - however, these barrows cannot be excluded from the list of the Golden Horde monuments: they were attended by the nomads with different purposes (as cult places or source of a profit, in case of grave robbery). Mounds of the Golden Horde barrows described below, had a diameter from 4 up to 22 m and height from 8 up to 178 cm; grave pits of main burials had depth from 30 up to 236 cm.

95. Raslovka. In one of two barrows, located in 700-800 m to the north from the outskirts of the village 2nd Raslovka of Saratov area at the edge of terrace of the left bank of the Chardym and erected in Bronze Age. In 1989 during excavations of N.M.Malov burial 2 of the Golden Horde period was revealed (Malov N.M. Otchet ob arkheologicheskikh issledovaniyakh v Kalmytskoy ASSR, Saratovskoy i Volgogradskoy oblastyakh za 1989 g., p.3-6, fig.2-4). In barrow 2 were two inlet burials in oval graves: 1) burial place of a child in a woodblock with wooden overlapping, north-west orientation, a head is on a nape, arms are stretched along a body; the stock is represented by fragments of leather boots, 2) burial of an adult woman (?) in a wooden coffin, planks were connected by wooden thorns, south-west orientation, skull lays on the left cheek, the right arm is stretched along a body, left hand is on the right part of a pelvis; at the bottom of coffin the traces of felt mat were observed, in a coffin the rests of leather boots, two bronze earrings like an interrogative mark and also 7 bronze spherical buttons with roundish loop were found.

96. Novaya Lipovka, the village of Saratov area. In 500 m to the north-west from it on the left bank of the river Kurdium, in the southern part of the single barrow in 1987 K.Yu.Morzherin found on the ploughed land fragments of walls of the red clay Golden Horde vessel (Morzherin K.Yu. Otchet o razvedkakh v basseyne r. Kurdium, p.5).

97. Ust'-Kurdium II. In 6 km to the north-west from the village Ust'-Kurdium of Saratov area on the right bank of the Kurdium in 1985 G.L.Yakubovsky excavated 3 barrows, in one of which one main Golden Horde burial was found[51].

98. Ust'-Kurdium I. On the south-west outskirts of the modern village Ust'-Kurdium the group of barrows of the Golden Horde period (GASO, fund 3712, inventory 1, file 120, p.105, 107) was situated. In 1920 there were 22-25 barrows; then B.V.Zaykovsky excavated 2 barrows. In mound of one of them coals were found; the skeleton with western orientation with the face to the south, with hands along a body, in a coffin and with stock represented by bokka, a wooden comb with circular ornament, a metalic mirror with the image of concentric circles, a knife in wooden scabbard, a lash, scissors, a leather bag and boots (Ballod, 1923-1, p.82-84; Garustovich, Rakushin, Yaminov, tab.VII,*18*, VIII,*16-18*; Nedashkovsky, Rakushin, 1998-1, p.90, 105, fig.1,*6*)[52] were found. From the stock of another barrow only a large fragment of a sabre[53] was preserved. In 1963 I.V.Sinitsyn in this group excavated 11 barrows, and in 1980-s G.L.Yakubovsky studied one more (with two Golden Horde burials).

The barrows, investigated in 1963, contained only main burials of the XIIIth - XIVth centuries (Garustovich, Rakushin, Yaminov, p.209-216, fig.12-13, tab.XXVIII). Barrow 1: in grave with plank overlapping, atop of which a pair of stirrups laid, a female skeleton in a wooden block with west orientation and stretched limbs was found; in the stock the following articles were found: iron bit, a bronze mirror with ornament

[51] Reported by A.I.Rakushin. In reports this barrow was not described.

[52] SOMK NN SMK 54731 (AO 505/1), NVSP 18047, 30828-30829, SUAK 3423, AO 505/2,8.

[53] SOMK N SMK 57839/A-2932 (AO 505/5).

as two concentric circles and point at the centre, a ceramic spindle whorl, a wooden cup, and also a red-brown silk fabric with gold threads (Nedashkovsky, Rakushin, 1998-1, p.90, fig.1,7)[54]. Barrow 2: in grave with a plank mat, overlapping and coat of walls a burial place of an adult person, with west orientation, stretched limbs and stock - the rests of a saddle, covered by leather, 2 iron stirrups with wide foot[55] were found, also fragments of bits and an uncertain iron article. Barrow 3: male burial was opened, with west orientation (face to the north) and stretched limbs in a wooden coffin (the frame with overlapping) with stock - leather boots with boot-tops lower than knees, fragments of iron plates and a wooden bowl with a foot turned on a lathe[56]. Barrow 5: female burial with the rests of a woodblock, west orientation, stretched limbs and stock: an iron knife, scissors, an awl with a wooden handle, a bronze plate and beads[57]. Barrow 6: female burial in a woodblock with west orientation, stretched limbs and stock - two earrings in the form of an interrogative mark, an uncertain bronze ornament, several beads, an osseous ring, fragments of a belt and leather boots which were not reaching up to knees[58]. Barrow 7: female burial with west orientation and stretched limbs in a coffin with overlapping from wood bark was investigated; stock – a bronze mirror and parts of bokka**,** sewn with red and green threads: a birch tube with traces of a silvery foil and red paint, an oval article from birch bark, polyhedral prismatic appendage from a light green stone[59]. Barrow 8: male burial in alcove (in the south-east wall of a grave; the entrance to the alcove was blocked by planks) with stretched limbs, head to the north-east, skull laid on the left cheek; stock – a leather bag with a bronze plate with the image of a dragon (?), a leather belt with bronze plates, a boot sole, a birch bark quiver with a wooden plank and line ornaments, made by a dark paint, a wooden dish and a musical instrument - kobyz[60]. Barrow 9: female burial place in a coffin with the head to the west with arms half-bent in elbows; stock – a birch bokka, a wooden cup with the foot and a bilateral comb, a clay spindle whorl, an iron plate with two apertures, a needle and an awl with the wooden handle, leather low boots and a small bag, fragments of wood and leather pieces[61]. Barrow 11: in grave with batter along the north-west wall stretched female burial with north-east orientation (face to the south-east) was investigated, the burial was faced by planks; stock - iron stirrups and a plate with umbo, rests of bokka (a birch bark tube) and a birch bar quiver with ornaments (6 osseous carved plates, metal plates with stone inserts, an iron plate and pendant plaited from woollen threads and decorated with a bronze wire), a carved osseous button, fragments of a bow, an arrowheads with shafts (9 items), a wooden cup with the foot and a wooden saddle fitted with leather[62]. Barrow 12: extended burial place of an adult person with the west orientation in a coffin and with stock - iron bit, stirrups and dagger, rests of leather boots, a half of uncertain Jochid dirhem[63] were found. Barrow 13: male burial in a coffin with the west orientation and stretched limbs, to the left of buried there was a skeleton of a horse with the skull to the west; stock - iron stirrups and a birch bar quiver with several arrows.

99. Dolgy Buerak, village of Saratov area. In 1963 I.V.Sinitsyn in group 2, situated in the wood near the village excavated the barrow containing one main burial with west orientation, on a mat, with a knife, an arrowhead, bit, stirrups, a purse and a steel[64].

100. Vishnevoe. In the southern part of Leninsky district of Saratov during the excavations of settlement Vishnevoe of the Bronze Age in 1983 I.I.Dremov found a late nomadic burial: the barrow did not show on the surface due to the earthwork on the monument for decades (Dremov, 1985-1; Dremov, 1985-2; Dremov, 1992). Orientation to the east, face to the south. An adult man was buried in the rectangular-like grave, in which the traces of wood perish were found; the legs were bent in knees, the left arm was stretched, the right hand was on pelvis bones. Stock: iron stirrups with wide foot, two-compound bit with mobile rings, a spearhead and tip of the back side of a spear, a bronze mace-head with thorns, having an iron wedge in the bolster, 6 arrowheads (including 2 'srezen' and 1 'armour-piercing'), a knife, a steel, an iron girdle clasp (8 items), short nails and braces from a bridle (?), and also 11 Jochid dirhems, stroked in Azak (Birdibek: 759 A.H.-4; Khizr: 762 A.H.-1; Abdullah: 765 A.H.-6).

101. Astrakhansky Trakt. In 1934 P.S.Rykov on the watershed of the Volga and Latryk in 10-12 km from Saratov at Astrakhansky Trakt excavated 2 barrows in group 1, consisting of 15 mounds. The main burials of both barrows concerned to Bronze Age, and inlet burial places in coffins, with stretched limbs - to the Golden Horde time (Archives of IIMK, fund 2, 1934, file 263, p.4-5). In barrow 1 a female burial 1 was opened with the north-east orientation (face upwards) and coals in back-fill, containing an iron clasp, a leather belt with bronze plates[65], rests of a bronze bracelet and bones of ram. In barrow 2 the inlet a burial place of a girl - teenager (burial 2) was investigated, with south-west orientation, with necklaces from spherical and cylindrical dark blue glass beads and a ridge green kashi bead, iron scissors, a bronze earring as an interrogative mark, a glass ring, rests of brocaded fabric and a wooden box (?), a silver girdle clasp and a dashboard ring (Fyodorov-Davydov, 1966-1, p.896).

102. Dvoenka II. To the south – south-east from the village (nowadays in Lysogorsky area) in a large barrow group, in

54 SOMK NN SMK 40867, NVSP 33535-33536 (AO 2571/1-2), AO 2570-2571.

55 SOMK N NVSP 33537/1-2 (AO 2573/3).

56 SOMK NN NVSP 33538 (AO 2574/3), AO 2572.

57 SOMK NN SMK 40861-40865, AO 2573.

58 SOMK N SMK 40866, AO 2574.

59 SOMK NN NVSP 33539 (AO 2575/1), AO 2575.

60 SOMK NN SMK 57951/A-3000 (AO 2576/4), 58094-58095/A-3014-3015 (AO 2576/1-2), NVSP 33540-33541 (AO 2576/3-4), AO 2576.

61 SOMK NN SMK 58096-58098/A-3016-3018 (AO 2577/2-4), AO 2577.

62 SOMK NN SMK 57940/A-2989 (AO 2578/4), 58099-58102/A-3019-3022 (AO 2578/1-2,6), 58105/A-3023 (AO 2578/5), NVSP 33542-33543 (AO 2578/1,7), AO 2570-2579. It is possible that such articles as described in SOMK as 'barrow 11' may originate from barrow 2.

63 SOMK NN NVSP 33544-33545 (AO 2579/1-2).

64 SOMK NN NVSP 33737-33740 (AO 2570/1-4).

65 SOMK NN NVSP 33933-33934.

which there were mounds of Bronze Age and Early Iron Age, in 1923 P.S.Rykov excavated the Golden Horde barrow, containing one main burial with east orientation in rectangular-like grave in a coffin (Garustovich, Rakushin, Yaminov, p.124, tab.VIII,*20,22,24-25*; Rykov, 1925-1, p.41-43). In the barrow mound, surrounded by a ditch, there was a boom, above the grave there was a stone pavement, in which 2 fragments of pottery were found; above a coffin in the western part of the grave a part of a horse jaw with iron bit laid. The stock of the burial was represented by two iron girdle clasps and a birch bar quiver with brown colouring and with 'srezen' arrowheads, attached to shafts by threefold coils of iron wire[66].

103. Dvoenka I. A large barrow group is situated in 2 km to the south-west from the village Dvoenka, in 2.3 km to the north-east from the village Bol'shaya Dmitrievka. In 1909 V.N.Glazov during excavations of barrow 5 revealed stockless male burial with western orientation; the left hand laid on bosom, the right - on pelvis (Garustovich, Rakushin, Yaminov, p.94-95, tab.IV,*9*; Archives of IIMK, fund 1, 1909, file 18, p.88-89, 91, fig.20). In 1989 during the excavations of A.D. Matyukhin in mound of barrow 1, containing burial of Bronze Age and late Sarmatian period, in the filling of robbers' manhole a fragment of light brown pottery vessel with the ornament as parallel drawn lines (Matyukhin A.D. Otchet ob arkheologicheskikh issledovaniyakh v Saratovskom i Lysogorskom rayonakh Saratovskoy oblasti v 1989 godu, p.25-26, fig.143,*10*)[67] and an iron arrowhead ('srezen') were found.

104. Bol'shaya Dmitrievka I. In the beginning of 1960-s near the village a number of articles probably occurring from the destroyed Golden Horde barrow were found: a bronze mirror with the image as vegetative quirk, an wrought and a stamped plate, syul'gama without catch, an iron awl and a ring from a bridle, and also a glass bead (Nedashkovsky, Rakushin, 1998-1, p.89, 108, fig.4,*2*)[68].

105. Bol'shaya Dmitrievka II. In 1990 A.D.Matyukhin excavated barrow 1in 2 km to the south-west from the village at terrace of the left bank of Karamysh river. Barrow has, besides the graves of the Early and Middle Bronze Age, and Early Iron Age, later burial 3 of teenager without grave goods: skeleton with the western orientation and stretched extremities (Matyukhin A.D. Otchet ob arkheologicheskikh issledovaniyakh v Lysogorskom i Dergachevskom rayonakh Saratovskoy oblasti v 1990 g., p.17, fig.97, 99).

106. Rybushka II. In barrow group 7, in 1.5-2 km to the south-west from northern outskirts of the village Rybushka of Saratov area, on the first terrace of the left bank of the river Karamysh near the barrow 1 in 1987 S.I.Chetverikov found the fragment of the wall of a red clay Golden Horde vessel (Chetverikov S.I. Otchet ob arkheologicheskikh issledovaniyakh, p.25-26).

107. Rybushka I. During the excavations of barrow group 2 in 700 m to the east – south-east from the village Rybushka on the right bank of the river Karamysh in 1989 S.I. Chetverikov opened 2 Golden Horde barrows, containing only main burials with north-east orientation (Chetverikov S.I. Otchet ob arkheologicheskikh raskopkakh kurgannogo mogil'nika u s. Rybushka Saratovskogo rayona Saratovskoy oblasti v 1989 godu, p.27, 39-40, fig.89-95, 133, 135-138). In barrow 14 there were an iron ring and fragments of the stirrup with wide foot[69], and also bones of ram's leg; the person buried laid on mat in a stretched position. In barrow 27 a skeleton was found, with the left hand laid on the right half of the pelvis, the right arm was stretched along a body; the stock is represented by a knife, a massive spindle whorl from a vessel wall[70] and a bone of ram's leg.

108. Rybushka III. In 10 m from one of the ploughed mounds (barrow 1) of barrow group in 5.5 km to the south-east from the village Rybushka on the second terrace of the left bank of the river Karamysh S.I.Chetverikov in 1988 found the fragment of grey clay pottery vessel probably of the Golden Horde time; on the same mound the rests of wood perish (Chetverikov S.I. Otchet ob arkheologicheskikh razvedkakh v Lyisogorskom i Saratovskom rayonakh Saratovskoy oblasti, p.12) were found.

109. Panitskoe, a village of Krasnoarmeysky area. In 1.5-2 km to the south-west from the village on the second flood-lands terrace of the left bank of the river Karamysh near one of the barrows of group 2 on the ploughed land in 1987 S.I.Chetverikov found 2 fragments of red Golden Horde pottery, one of which had ornament as the drawn parallel lines (Chetverikov S.I. Otchet ob arkheologicheskikh issledovaniyakh, p.16, fig.61-63).

110. In the village Sosnovka in 1993 during the settling of a pole were revealed: an iron tip of a javelin with an open plug and a human skull; during the territory investigation by N.M.Malov it was stated that it comes from a destroyed burial situated in the mound of a barrow (Malov, 1994, p.140; Malov N.M. Otchet ob arkheologicheskikh issledovaniyakh v Krasnoarmeyskom i Khvalynskom rayonakh, p.4-5, fig.34,*1*). In the beginning of the XXth century during the excavations of barrows near the Sosnovka village 'human bones, stirrups and armaments were found' (Archives of SOMK, fund 85, inventory 1, file 89, p.195; GASO, fund 407, inventory 2, file 968, p.41).

111. Skatovka II. At the settlement Skatovka (N 38) in 1926 P.D.Rau excavated a half-destroyed barrow (?) grave with west orientation containing 2 beads - glass and stone - and fragments of a small metal mirror (Garustovich, Rakushin, Yaminov, p.179-180; Archives of IIMK, fund 2, 1925, file 160, p.29; Archives of IIMK, fund 79, file 17, p.5; Archives of IIMK, fund 79, file 34, p.12-13).

112. Skatovka I. To the north-west from modern village Skatovka there was a large barrow group (up to 70 mounds), nowadays partially destroyed by reservoir.

66 SOMK NN NVSP 27489-27494 (AO 492/1-5).

67 SOMK N NVSP 29431.

68 SOMK NN NVSP 33923-33929.

69 SOMK NN NVSP 30917-30918.

70 SOMK NN NVSP 30927-30928.

In 1920 4 Golden Horde barrows with burials with stretched arms and legs with west orientation were excavated by P.D.Rau (Garustovich, Rakushin, Yaminov, p.172-174, fig.8,*1-3,6-8,10-11,13*; Archives of IIMK, fund 79, file 17, p.5; Archives of IIMK, fund 79, file 18, p.2; Archives of IIMK, fund 79, file 34, p.12; Archives of IIMK, fund 79, file 36, p.15-18). In barrow 11 under the mound (which also contained bricks) there was a ring-like brick pavement, 2 burials were found in it: in a female burial in a coffin a bronze earring as an interrogative mark, with amethyst, was found, and above a coffin (blocked by three lines of bricks and imposed by defective bricks) there were an axe and a mattock; in a child's burial (without a coffin) glass beads were found. In barrow 12 in back-fill of a grave 2 a stirrup, bit and an uncertain iron article, large pieces of leather of uncertain form were found; in a grave, containing male burial the following articles were found: a spear-head, 2 iron girdle clasps, a dagger (?), a birch bar quiver (linked by iron nails) and a tube (wrapped up in leather), rests of leather articles (some of them had bronze 'ornaments'), and also a flint and a steel, 'parts of a harness' and horse bones. In barrow 13 in the mound and in filling of the grave coals were noticed; in female burial only 1/4 of a silver Golden Horde coin was found. In barrow 14 in mound and in filling of the grave coals were also found; a 10-12 year-old child was buried.

In 1953 I.V.Sinitsyn excavated 10 mounds with burials, which we can relate to the Golden Horde time (Sinitsyn, 1956-2, p.83-84; Sinitsyn, 1959, p.159-162, 164-165, 170, 172, 175, 204-205, fig.55,*1,4-5*, 57,*3*; Archives of IIMK, fund 79, file 108, p.14-15, 17-18; Archives of IIMK, fund 79, file 109, p.20-22, 26-27, 31-32; Sinitsyn I.V. Otchet ob arkheologicheskikh issledovaniyakh Zavolzhskogo otryada Stalingradskoy ekspeditsii v 1953 g., p.9-12, 18-24, 27-28, 39-41, 47-50, fig.10, 12, 15, 17-18, 28, 54-56, 68). Barrow 1 contained one male burial with west orientation with wooden overlapping in a grave having batter along the northern wall; the stock is represented by a birch bar quiver, bone slabs for facing a bow, rests of leather boots and a bag with bronze clasp of pentagon-like shape, an iron knife and a steel[71]. In barrow 3 also there was a male burial with west orientation in a grave of the same design; stock: iron two-compound bit, iron stirrup with wide flat foot and roundish handle and a bronze cup[72]. In barrow 5, containing also Yamnaya culture and Sarmatian burials, inlet man's burial 2 with mat and overlapping was revealed, with west orientation (face upwards) and batter along the northern wall of grave, on which the following items laid: a skull and bones of horse legs, an iron two-compound bit, the rests of a wooden saddle, two stirrups, rests of leather and birch bar articles; near the buried the articles were found: an iron knife[73], an arrowhead ('srezen'), bone slabs for facing a bow and a sabre with a bronze lap. In barrow 7 the extended female burial in a coffin with west orientation and stock was investigated: dark blue glass beads, a bronze wire earring, a lead bead (?), iron scissors and rests of a silk cloth; in mound burnt bricks were observed. Barrow 8 contained male burial on mat with the south-west orientation and hands stretched along a body, in grave hole with overlapping, along the northern wall of the grave there was a batter, and along the southern - small alcove; the stock was represented by an iron roundish girdle clasp, a steel, a knife, a bronze cup with an iron handle, a wooden article decorated with copper slabs and small nails, and also a peace of flint. In barrow 14 2 burials with stretched limbs and a head oriented to the west were revealed; in a male burial (face to the south), with mat, an iron knife and a steel were found; the female burial (head on a nape) with overlapping was stockless. Barrow 15 contained a female burial in a coffin with west orientation (head on a nape) and stretched limbs. The stock was represented by a bead, rests of leather footwear and clothes, red-clay pottery jug with a handle[74]; in the mound a sheep skull was found. In barrow 16 the female burial with west orientation (head on a nape), with a knife[75] was revealed. Barrow 19 had square raw fence with the sizes 4.5*5 m, in the mound there were sheep, cow and birds bones, and also fragments of a thin-walled red clay vessel; barrow contained 5 burials in the stretched position with heads to the west in simple graves: in male and two children burials the stock was not revealed, in adult female burial the rests of clothes and mat were found, and in filling of burial of the girl-teenager sheep bones and a fragment of the Golden Horde bronze mirror with vegetative ornament were found. In barrow 20 2 burials with west orientation were excavated: the main one, female, on a mat, with bronze ring-like wire earring and the inlet one – a stockless burial of a child.

113. Zaumor'e. On the second flood-lands terrace of the left bank of the Volga to the east from the village the barrow group from 16 mounds of small diameter is situated. In 1925 P.D.Rau excavated barrow N 1, containing 3 burials in coffins with west orientation and with coals in back-fill of graves: a child of 3-4 years (face to the south; in back-fill there was a horse skull), an elderly woman (face to the south, hands on a pelvis, in back-fill a cow bone was found; stock – a knife and boots with wide boot-top) and an elderly man (hands in the area of a pelvis) face to the north, with a knife having bone slabs for facing grip, in a wooden scabbard (Garustovich, Rakushin, Yaminov, p.175-176, tab.XX,*11-13*; Archives of IIMK, fund 2, 1925, file 160, p.22-23; Archives of IIMK, fund 79, file 17, p.2-3; Archives of IIMK, fund 79, file 34, p.1-4). 12 barrows, excavated in 1988-1989 by G.L.Yakubovsky and S.V.Lyahov, are published in details (Lyakhov, 1992; Lyakhov, Yakubovsky); all of them contained only burials of the XIIIth - XIVth centuries with west and north-east orientations, raw pavement and various stock. In 4 of 24 burials found there were Jochid dirhems: barrow 1, grave 1 - Uzbek: Saray al-Makhrusa 71? A.H.-1; Saray 734 A.H.-1; Janibek: Saray al-Djedid year? -2; barrow 3, grave 1 - Kulna: Gulistan 760 A.H.-1; barrow 7, grave 2 - Janibek: Saray al-Makhrusa 749 A.H.-1; barrow 14, grave 2 - Janibek: Saray al-Djedid 745 A.H.-1, 748 A.H.-1, 750 A.H.-1, 753 A.H.-1, year? -1.

114. Berezovka, village of Engels area. In 500-800 m to the

[71] SOMK NN NVSP 21886-21890 (AO 2077/1-5).

[72] SOMK NN SMK 44648 (AO 2085/1), NVSP 21893-21894 (AO 2079/1-2).

[73] SOMK N SMK 44644 (AO 2082/2).

[74] SOMK N SMK 44743 (AO 2093/2).

[75] SOMK N SMK 44650 (AO 2094).

east from the village in 1988 I.I.Dremov opened the Golden Horde barrow 2 with raw pavement of the square shape and two stockless burials: of an adult (face to the south, arms along a body) and a teenager (face to the north, hands on pelvis bones) with west orientation in coffins with nails and graves with steps (Dremov, 1997, p.146-147, 150, fig.1,*1*; Lyakhov, 1992; Dremov I.I. Otchet o raskopkakh mogil'nikov u sel Berezovka, Novoprivol'noe i Belogorskoe v Saratovskoy oblasti v 1988 godu, p.3-4).

115. Uzmor'e. In 1984 during the excavations of barrow 2 an inlet stockless burial 4 with west orientation was revealed; the legs of a skeleton were slightly bent in knees[76].

116. Podgornoe. In 1930 during the earthwork in 400-550 m to the east from the village a burial in a coffin was destroyed. The grave was oriented by the line north-west – south-east and had an alcove along the south-west wall; the stock was represented by an iron fragment of girdle clasp, an arrowhead ('srezen'), a fragment of a knife with traces of a wooden handle, a leather purse, a round birch bark box with 26 fragments of a hand-written poem in Mongolian language, a shallow bronze forged cup (inkwell?) and osseous 'pen' (Bulychev, Voronezhtsev, Maksimov, Totfalushin, p.28-29; Garustovich, Rakushin, Yaminov, p.189-190, tab.III,*18*; Iskhizov, p.127-131; Poppe; *Nomads of Eurasia*, p.83)[77].

117. Kvasnikovka. In barrow group stretched from the village to Pokrovsk (nowadays Engels), in 1911 A.A.Krotkov, G.N.Minkh and O.D.Okhlyabinin excavated several mounds. In one of them the fragments of the Golden Horde pottery and an inlet stockless burial of a child with the head to the north-west, face to the south with overlapping were found. In another barrow the main burial without stock with south-west orientation was excavated.

118. Barrow to the south from Engels, to the left of a road to the village Kvasnikovka. In 1959 in the destroyed main late nomadic burial in this barrow (containing also pieces of chain armour, stirrups, a belly-bend clasp, fragments of bit and bone slabs for facing a saddle) in wide grave hole oriented by the line east - west (orientation of skeleton was not possible to determine; in the grave a skull and bones of horse legs were found), there was revealed an Old Russian iron helmet decorated from the top with the bronze gilt socket with the image of four birds. The helmet is dated as the XIIth - XIIIth centuries, and its socket is completely similar to the pomme of a helmet from the Tsarevskoe site of ancient city (Maksimov, 1960, p.190-193, fig.1; Poluboyarinova, 1972, p.169-170, 185, fig.3,*2*; Poluboyarinova, 1978, p.60-61, 122, fig.8; Fyodorov-Davydov, 1966-2, p.33-34, fig.5,*2*; Fyodorov-Davydov, 1984, fig.112,*3*; Iskhizov, p.122-123, fig.23). However it is possible that the burial may be dated as pre-Mongolian time.

119. Pokrovsk. According to B.V.Zaykovsky, in 1899 near the eastern edge of Pokrovskaya district in the yard of one of the houses the local people excavated the burial (probably a barrow one) with east orientation (a skeleton with stretched limbs), containing an iron axe with a broad cutting edge and a prominent butt and a polyhedral bludgeon (Garustovich, Rakushin, Yaminov, p.33, 81, fig.3,*1-2*; Zaykovsky, 1929, p.113-116, tab.1,*1-2*).

To the south-east from the town in 1914 and in 1918-1920 S.A.Shcheglov, S.N.Chernov and P.N.Shishkin investigated 7 Golden Horde barrows (Garustovich, Rakushin, Yaminov, p.100-101, 104, 110-111, tab.III,*10*, VI,*20-27*, VIII,*1-12*; Nedashkovsky, Rakushin, 1998-1, p.91, 93, 106-107, fig.2,*3,8*, 3,*5*; Shishkin). Barrow 2 contained in mound a dog skeleton, rests of wood, leg bones of a horse (they were also present in the filling of a grave; the skull of a horse with bit was found on the batter, placed along the northern wall), ashes and fine burnt bones; a female burial with east orientation (head on a nape) in a coffin with nails and with stock was excavated. The stock was represented by the rests of a silk cloth, a half of iron hinge scissors, bokka, a bronze mirror with the image of dogs and hares, and a spherical article, and also a conic lead seal[78]. In barrow 3 human bones, an iron steel, 2 arrowheads, fragments of two knifes, two girdle clasps and uncertain articles (slabs for facing?) were found, and also an osseous plate with circular ornament and a flint[79]. Barrow 4 contained a burial in a coffin with west orientation (head on a nape, limbs are stretched); stock – a green glass bead, leather boots and a purse with an oval double blade steel and a piece of fossilised tree[80]. In barrow 5 in mound there were ram and horse bones; a burial in a coffin with north-east orientation was revealed (head on a nape, hands along a body), were found iron hinge scissors, and also a fragment of a metal mirror with a convex point in the centre and a small concentric circle[81]. Barrow 6 contained the burial of a teenager in a coffin with west orientation (skull on a nape, hands on pelvis bones), two ram spinal bones and 5 knucklebones; the stock is represented by an iron knife, a lead copy of ram knucklebone[82], a silver earring and a thin closed wire ring. In barrow 7 a burial in the extended position in a wooden coffin with west orientation (head on a nape) was revealed. The stock was represented by bokka, hinge scissors[83] and leather boots. Barrow 8 contained a burial with north-west orientation (skull on a nape, limbs are stretched) in a coffin in alcove (in a south-west wall of grave hole); the stock is represented by an iron knife, hinge scissors and an awl with a wooden handle, a fragment of a metalic mirror with ornamentation as several arches located one in another[84], bokka, rests of brocaded clothes and silk cloth, and also leather boots and wooden vessels.

In 1921 P.S.Rykov excavated barrow 1. In the mound and filling

[76] Information about the funeral ceremony of the monument was given by A.I.Rakushin.

[77] GE NN KP 55704-55713, Reg. 65166-65176; SOMK N SMK 57939/A-2988 (AO 1921); EKM NN 99/2, 100 and without inventory N.

[78] SOMK NN NVSP 30842-30846 (AO 510/1-5).

[79] SOMK NN NVSP 30859-30864 (AO 515/1-6).

[80] SOMK NN NVSP 30660-30662 (AO 884/1-4).

[81] SOMK NN NVSP 30833-30834 (AO 508/1-2).

[82] SOMK N NVSP 30835.

[83] SOMK N NVSP 30836 (AO 507/2).

[84] SOMK NN NVSP 30837-30841 (AO 506/1-4,6).

of the grave hole there were bones of a colt, stones and ashes. The barrow contained a stockless burial of a child, oriented to the east, with stretched limbs, in a woodblock with overlappings (Garustovich, Rakushin, Yaminov, p.122-123, tab.XII,*1-3*; Archives of IIMK, fund 2, 1921, file 111, p.28-33).

In 1927 in southern group 2 near Pokrovsk P.S.Rykov excavated 6 more mounds of the XIIIth - XIVth centuries, containing only main burials (Garustovich, Rakushin, Yaminov, p.144-146, tab.XIII,*4-8*; Nedashkovsky, Rakushin, 1998-1, p.91, 93, 108, fig.4,*8-9*; Fyodorov-Davydov, 1966-1, p.892). In one case (barrow 9) the orientation of the buried was not stated, in other cases they had west orientation. In barrow 5 the buried was placed with stretched limbs in a grave with a step along the northern wall; the stock: earrings as an interrogative mark, a mirror with ornament as a concentric circle on the edge, inside which there was an 8-petaled socket[85], iron scissors, a knife and an uncertain object, remains of leather footwear. In barrow 6 there was a male burial with stretched limbs; the grave had a step along the south wall and an overlapping; the right hand of the buried was on the belly, the left hand – on bosom, the face turned to the south. It contained iron cartridge with traces of cloth, a steel (?), a box and a knife, also the remains of leather boots. In barrow 8 was investigated a female burial, with the face turned to the north, with stretched limbs, in a coffin; stock: iron scissors and a knife, remains of leather footwear. During the investigation of the robbed barrow 9 in a grave oriented in the line south-east – north-west, there were found parts of iron stirrup and a belly-bend clasp. In barrow 10 there was a female burial with stretched limbs (the skull on a nape); stock: iron scissors, a bronze earring in the form of an interrogative mark and a mirror with ornamentation as several arches located one in other[86].

In 1928 in the south-east group P.S.Rykov investigated the robbed barrow 39 with unclear orientation of the buried. The stock is represented by iron: an uncertain object and an arrowhead, parts of leather from a boot, parts of a belt with traces of copper oxidant and a birch bark quiver (Garustovich, Rakushin, Yaminov, p.149, tab. XXII,*3*; Archives of IIMK, fund 2, 1928, file 154, p.22-23).

In 1985 in the town of Engels near a highway to Anisovka I.I.Dremov excavated the barrow, related to the southern group of Pokrovsk barrows. The basic burial belonged to Yamnaya culture, and inlet burials 2-4, having west orientation it is possible to define (Dremov I.I. Otchet ob arkheologicheskikh raskopkakh poseleniya Vishnevoe v gorode Saratove i kurgana v yuzhnoy chasti goroda Engel'sa v 1985 godu, p.1-2, 4, fig.4, 7, 9, 10,*1-2*) as belonging to the Golden Horde culture. Burial 2: in a coffin, the right hand is stretched, the left arm is bent in an elbow, the hand laid on the stomach; the rests of leather footwear were found also. Burial 3 was made in alcove, located in a southern wall of a grave, the face of buried person is oriented to the south, limbs are stretched. Burial 4, with the face to the south; stockless, as well as burial 3.

120. Suhaya Saratovka, the river in Engels area. In 1975 the expedition of L.L.Galkin in group 1, consisting of 3 barrows, in barrow 3 found inlet stockless Muslim burial 1 of the XIIIth - XIVth centuries: with west orientation, with the face to the south and with a small turn to the right side (Galkin L.L. Otchet o rabotakh, p.11, fig.35-36).

121. Sovetskoe (Mariental') II. In 12 km to the south from the village in 1929 in career barrow (?) burial with west (?) orientation and a batter along the northern wall of grave (Garustovich, Rakushin, Yaminov, p.188-189, tab.XXI,*2-15*; Kramarovsky, 2001, p.45-46, 50, 57, fig.19; Archives of IIMK, fund 2, 1930, file 142, p.3-4) was revealed. In burial the following articles were found: the rests of brocaded and silk cloth, gold belt set (from 22 articles), slabs for facing a handle (?) and 10 rectangular thin plates, fragments of a silver vessel, iron hook from a quiver, girdle clasp, two arrowheads, one of them with osseous 'whistling' cap, fragments of silvered and gilt iron slabs for facing saddle, rests of a bridle, article from birch bar, sewed by silk threads, fragments of a wooden casket with silver slabs[87], and also ram bones. Judging by shape of a gold belt set similar to materials from Gashun-Usta and Talasskaya valley (Kramarovsky, 1994, p.195-196, fig.5, 7, 9, 11, 17, 19), burial may be dated as second half of the XIIIth century.

122. Sovetskoe III. In barrow group 3, in 3.5 km to the south-east from the village, on a right bank of the river Bol'shoy Karaman, in 1988 D.G.Barinov excavated barrow 2, containing one main female burial with west orientation (face to the north) and with following articles: black glass barrel-like beads, a leather purse, a wooden bilateral comb and a mirror with the schematical image of two floating one after another fishes (Barinov, 1997-1, p.185; Barinov D.G. Otchet ob arkheologicheskikh raskopkakh kurganov v Sovetskom rayone Saratovskoy oblasti v 1988 g., p.23-24, fig.73-75). In 1996 during the investigations of I.V.Semenova between the barrows were founded fragments of red-clay pottery and metallic wares, including a fragment of the Golden Horde bronze mirror (Semenova).

123. Sovetskoe (Mariental') I. In 1926 approximately in 3200 m to the east from the village A.A.Krotkov and P.D.Rau investigated the robbed barrow D-34 with not clear orientation of buried person, in filling of the grave ram and cow bones were found together with an opal bead and pieces of a silk cloth (Garustovich, Rakushin, Yaminov, p.181-182; Archives of IIMK, fund 2, 1927, file 145, p.84; Archives of IIMK, fund 79, file 31, tetr. N 5, p.28).

124. Susly, village of Marx area. In 1920-s P.S.Rykov investigated a large barrow group mainly containing burials of Bronze and Sarmatian epoch (Arzyutov, 1926, p.74-75; Garustovich, Rakushin, Yaminov, p.129-130, tab.XIV,*12,14*, XXVI,*22*; Nedashkovsky, Rakushin, 1998-1, p.90-91, 106, fig.2,*2*; Rykov, 1925-2).

In barrow 40 in 1924, under the mound with ashes and coals, there was main burial of a woman of middle age with west

[85] SOMK N AO 941/2.

[86] SOMK N AO 945/2.

[87] Partially preserved materials from the grave are kept in the funds of EKM (NN 820-842).

orientation and stretched limbs, in a coffin, on felt mat, with brocaded hat, 2 bronze earrings in the form of an interrogative mark, with glass appendage and wire braid, mirror with low rim and lateral trapeze-like handle - loop, with high cone at the centre of a disk in a leather cover, iron spearhead with leaf-like edge and knife, wooden needle-case, 2 barrel-like dark blue glass-like beads, 2 drilled cowrie seashells and a Janibek pul, coinage of Saray al-Djedid (Fyodorov-Davydov, 1963, p.194, N 410; Fyodorov-Davydov, 1966-2, p.264, N 326)[88].

In 1926 there was studied in barrow 67 a main stockless male burial with stretched limbs, oriented with the head to the east, on a birch bark mat with overlapping in a grave with steps along the long walls (Garustovich, Rakushin, Yaminov, p.143; Archives of IIMK, fund 2, 1927, file 187, p.70).

125. Krutoyarovka, the village of Sovetsky area. On the right bank of the river Bol'shoy Karaman between the villages Raskatovo and Krutoyarovka there are 32 mounds, 12 from which were excavated by E.K.Maksimov in 1969; 2 mounds contained one main plundered burials of the Golden Horde epoch per each. In barrow 1, surrounded by the ditch, in back-fill of a hole the fine fragments of pottery, fragments of uncertain iron articles, parts of osseous carved painted slabs for facing quivers of the XIIIth - XIVth centuries were found. 3 bronze wire pendants[89] and bones of ram leg; the skeleton of the person was oriented with the head to the north-east (Maksimov E.K. Otchet ob arkheologicheskikh raskopkakh, p.4-5, fig.4-7). Barrow 2, obviously, contained also a burial with north-east orientation in a coffin, with uncertain fragments of iron articles[90] and ram bone (Maksimov E.K. Otchet ob arkheologicheskikh raskopkakh, p.5-6, fig.8-10).

Of 31 monuments, described in this paragraph, 16 (only in 12 of them the burials of the XIIIth - XIVth centuries were found, in others - only separate finds in mounds were revealed) are situated on the right bank of the Volga, and 15 - on the left bank. The difference becomes significant if we take into account, that on the left bank 6 out of 9 barrows groups of the Golden Horde time are located and 84 (75.7%) burials from 111 are investigated. The given situation is easily explained by the fact that the nomads prevailed on the left bank of the Volga, where the domain of Golden Horde khans was situated. On the right bank there were settled way of life prevailed. It is remarkable, that on the right bank from 27 burial places only 6 (22.2%) are inlet, and on the left bank from 84 - 29 (34.5%); on the right bank 8 barrows (32%) with the Golden Horde burials are situated outside the barrow groups of the XIIIth - XIVth centuries, 17 (68%) - in groups, and on the left bank these numbers are 9 (15.3%) and 50 (84.7%) respectively. These data can be considered as a reason for longer functioning of burial grounds of the left bank region.

From 111 burials 76 (68.5%) are main and 35 (31.5%) - inlet. 17 barrows (20.2%) with burials of the XIIIth - XIVth centuries are situated outside the Golden Horde barrow groups, and 67 (79.8%) - inside barrow groups. 12 monuments (38.7%) are placed in groups (in one case - N 100 - on the settlement) of the previous periods: Bronze Age (NN 95, 100-102, 105, 119-121, 124), Early Iron Age (NN 102-103, 105, 124-125) and pre-Mongolian period (NN 112, 120).

In mounds of some barrows there were coals or ashes (N 98, barrow 1, 1920; N 112, barrows 13-14, 1920; N 113, barrows 2, 7, 10; N 119, barrows 2, 1914, 5, 1919), animal bones (N 112, barrows 15, 19, 1953; N 113, barrows 1-2, 7-8, 12, 14; N 119, barrow 2), pottery (N 112, barrow 19, 1953; N 113, barrows 2, 7-8, 10), bricks (N 112, barrow 11, 1920, barrow 7, 1953), an iron mattock (N 113, barrow 9), rests of wooden constructions (N 102, 1923; N 113, barrow 10; N 119, barrow 2), stone pavement (N 102, 1923), annular (N 112, barrow 11, 1920) and rectangular continuous (N 113, barrows 1, 7; N 114) brick pavements above graves, square raw fence (N 112, barrow 19, 1953) and pavement from raw bricks (N 113, barrow 2). Around of mounds in three cases there were small round ditches (N 102, 1923; N 113, barrow 3, N 117, barrow 1). In backfill of sepulchral holes coals and ashes were found (N 101, barrow 1; N 112, barrows 13-14, 1920; N 113, barrow 1, 1925; N 119, barrow 1, 1921).

Let's analyse the burial ceremony of the barrows, situated in Ukek neighbourhood. The types of burials, as well as in the previous paragraph, are allocated depending on orientation; inside types the variants are allocated: depending on the form of grave, from the presence of burial stock, horse bones, coffin (mat and overlapping). All combinations of the specified attributes were taken into account. If there are data on position of a skull and limbs, it is stipulated inside the variants.

Type 1 (70 burials). With the head to the west.

Variant A (12 burials). In simple graves, without coffins and without stock. In 9 cases limbs were stretched, in one burial the left hand laid on bosom, the right - in the area of a pelvis. In one burial the skull laid on a nape, in 2 others it was turn with the face to the south.

Variant B (8 burials). In simple graves, without coffins but with stock (in one case - face to the north, in one more – on a nape); in 6 cases the buried persons were stretched.

Variant C (5 burials). In simple graves, in coffins (in one case with overlapping) without stock. The skull of one of buried laid on a nape.

Variant D (30 burials). In simple graves, in coffins (in 4 cases with woodblock, in 4 with mat) with stock. In four burials – with the face to the south, in three others - to the north; in four cases the head laid on a nape. The limbs were extended in 16 complexes; hands on pelvis bones - in 6, in one case the right arm was stretched, and the left hand laid on a stomach.

Variant E (1 burial). In a simple grave, without a coffin with extended limbs, with horse bones and stock.

Variant F (1 burial). In a simple grave, in a coffin, with the face to the south, with horse skull, without stock.

88 SOMK NN SMK 46324 (AO 513/1-2), NVSP 21019-21022 (AO 513/3-6).

89 SOMK NN NVSP 24838-24839.

90 SOMK N NVSP 24840.

Variant G (1 burial). In a simple grave, in a coffin with stretched limbs and stock, to the north from the person there was a horse skeleton, oriented by a skull to the west.

Variant H (2 burials). In graves with steps, in coffins without the stock. In one of burials the skull laid with a facial part to the south, arms were stretched, in the other case – facial part to the north, hands on pelvis bones.

Variant J (1 burial). In a grave with steps, in a coffin with stock; stretched, face to the north.

Variant K (5 burials). In graves with batters along the long wall (in four cases above graves there were wooden overlappings) and with stock. In one burial the skull was with the face to the south, the right hand on pelvis, the left – on bosom.

Variant M (1 burial). In graves with batters along the long walls, with overlapping with stock. The skull is oriented with the face to the south, limbs are stretched.

Variant N (2 burials). In graves with batters along the northern walls, on which skulls and bones of horse legs were placed, with stock. In one case the coffin, in the other-mat and overlapping were revealed. In one burial hands laid in the field of a pelvis, and the face was inverted to the south.

Variant O (1 burial). In alcove in a southern wall of a grave without a coffin and without stock. Limbs are stretched, the skull is turned with facial part to the south.

Type 2 (7 burials). With the head to the south-west.

Variant A (1 burial). In a simple grave, without a coffin and without stock.

Variant B (1 burial). In a simple grave, without a coffin but with stock. Extended, the head is on a nape.

Variant D (2 burials). In simple graves, in a coffin with stock. The skull of one laid on the left cheek; in one case the skeleton is stretched, in the other the right arm is situated along a body, left hand - in the area of a pelvis.

Variant I (1 burial). In a grave with steps, without a coffin with stock; stretched, face to the north-west.

Variant K (2 burials). In graves with batters along north-west walls (in one case, position of the batters is not precisely specified, overlapping above the grave in this burials was not observed, the legs were slightly bent; in the other burial place along a southern wall there was a small alcove, the arms are stretched along a body) and with stock.

Type 3 (6 burials). With the head to the east.

Variant B (1 burial). In a simple grave, without a coffin, with stock. Limbs are stretched.

Variant D (1 burial). In a simple grave, on mat with stock. The skull is directed by facial part to the south, the left arm is stretched, right hand is on pelvis bones.

Variant F (1 burial). In a simple grave, in a woodblock, without stock. Limbs are stretched. A horse skull is found also.

Variant G (1 burial). In a simple grave, with a coffin, with stock. A horse jaw is found there.

Variant L (1 burial). In a grave with batters along the long walls, with a mat and overlapping, without stock. Limbs are stretched.

Variant N (1 burial). In a grave with batter along northern wall, on which there was a horse skull, in a coffin with stock; the skull laid on a nape.

Type 4 (11 burials). With the head to the north-east.

Variant B (3 burials). In simple graves, without coffins but with stock. In one case the skull with a facial part was oriented to the south-east; in one burial arms were stretched along a body, in the other the left hand laid on pelvis bones, and the right arm also was stretched along a body.

Variant D (6 burials). In simple graves, in coffins (in one case there was a mat) with stock. In 5 cases the stretched position of the buried person was revealed; in three burial places the skull laid on a nape, in the fourth – with the facial part to the north-west.

Variant K (1 burial). In a grave with batter along a north-west wall of a grave and with stock; the skull is turned with facial part to the south-east, limbs are stretched.

Variant P (1 burial). In alcove in a south-east wall of a grave, with overlapping and with stock. Limbs are stretched, skull on the left cheek.

Type 5 (3 burials). With the head to the north-west.

Variant C (1 burial). In a simple grave, with overlapping without stock; the skull laid on the right cheek.

Variant D (1 burial). In a simple grave, in a woodblock with stock. A skull - on the right cheek, the arms are stretched.

Variant P (1 burial). In alcove in a south-west wall of a grave, in a coffin with stock. Limbs are stretched, skull on a nape.

Thus, we have the data about 97 burials under burial mounds with known orientation. There are 5 versions of orientation of the buried persons: west (72.2% of all burials), north-east (11.3%), south-west (7.2%), east (6.2%) and north-west (3.1%).

West orientation of the buried persons absolutely prevails. A wide circulation of burials of types 1-2 and variants A-D (they make 60.8% of all nomadic burials in Ukek neighbourhood) we can connect with Islam spreading among the nomads of

the Golden Horde. It is remarkable, that only in barrows with burials with western and, in one case, with south-west orientation, there were brick constructions in mounds, which can be connected with the processes of Islam spreading and nomads transition to the settled way of life (Rakushin).

Only in 5 complexes with west orientation horse bones were found (type 1E-G, N). By burial ceremony it is possible to relate 3 burial places of types 1G, N (with a skeleton or with skulls and bones of horse legs), according to G.A.Fyodorov-Davydov and A.G.Atavin (Atavin, p.135-139; Fyodorov-Davydov, 1966-2, p.150-152), to the monuments of 'chyornye klobuki', who moved to the Volga region in the Golden Horde period, or kipchaks (type 1G). In two other burials (types 1E-F) only separate horse bones were found.

Burials with north-east (types 4B, D, K, P) and north-west (types 5C, D, P) orientations, comprising together 14.4% of all burial places, are connected, obviously, with tribes of eastern, Central Asian origin which appeared in the Volga region in the epoch of Mongolian invasion (Fyodorov-Davydov, 1966-2, p.159-160). In two of these burials alcoves (types 4P, 5P) were revealed, which sometimes can be met in burials of the medieval Mongols (Imenokhoev, p.28); except these complexes in the considered territory there is only one alcove burial place - with west orientation (type 1O).

Besides parts of horse skeleton (in burials of types 1E-G, L and 3F, G, N) in graves of 9 complexes with stock - 6 with north-east (types 4B, D) and 3 with west (the types 1B, D, K) orientations - ram bones were found. The presence of ram meat in the grave was one of the features of medieval Mongolian burial ceremony (Imenokhoev, p.35).

Other burials (the types 1H, J-K, M, 2I, K, 3) make a rather small group (19.6% of all complexes).

24 burials are female, 19 are male (the data are only for these 43 complexes).

The stock was revealed in 72 burials, that makes 74.2% from their general amount. It is remarkable, that only three of stockless burials (the types 3F, L, 5C) were oriented with the head not to the west or south-west; obviously, the disappearing of stock in burials we should connect with the influence of Islam.

The rests of bokka-cups were found in 7 burials (types 1B, D, 3N, 4K, 5P), one of which was in alcove (type 5P).

The gold and silver articles were found only in 6 burial places (6.2% from the total quantity), and gold and silver simultaneously were revealed only in one case, and in five others - only silver. From these 6 burials 3 have west orientation (types 1D, K), 2 – south-west (type 2D, I) and 1 – north-east (type 4D).

The rests of silk and brocaded cloth were found also in 6 burial places: with west (types 1D, K), south-west (type 2D), north-west (type 5N) and east (type 3P) orientations.

The articles of armament and horse equipage were found in 26 burial places (26.8% from total), and in 8 of them - only weapons, and in 8 - only horse equipage.

In three burials (two of them of types 2I and 4D) bronze clasps-syul'gamas were found.

The coins were found in 8 (8.3%) from 97 burials; in 7 burials dirhems were found, in one (N 117) – a pul. Unlike in the burials without burial mounds, in barrows only coins of the XIVth century were found.

On the basis of comparison of quantity of well documented burials under burial mounds (they are 97) and burials without burial mounds (there are 209 of them) it can be concluded, that in a regions of the Golden Horde Ukek the settled population prevailed above the nomads.

Burial ground of nomads settled down frequently not far from settlements, that says about mutual penetration, symbiosis of nomadic and settled ways of life in Ukek regions. However, the stock of nomadic burial places of examined territory, in the majority, considerably differs from the stock from Uvek site of ancient city and other settlements, which is obviously caused by different systems of economy - the nomadic cattle breeding on the one hand, and settled agriculture and craft – on the other hand.

§ 3.5. Coin hoards

126. Polchaninovka, village of Tatishchevsky area. In 1892 in 4 versts from the village a hoard was found. It consisted of 1226 silver coins in a ceramic vessel (?). There are detailed data about 21 dirhems: Uzbek: Saray-2; Janibek: Saray al-Djedid-9; Gulistan-3; Birdibek: Gulistan-2; Nauruz: Saray al-Djedid-1; Khizr: Saray al-Djedid-2; Gulistan-1; Ordu-Melik: Saray al-Djedid-1. Other coins are described (as hoard 'in the village Fedorovka of Saratov uezd') only on khans: Tokta-6, Uzbek-118, Janibek-611, Birdidek-175, Kul'na-76, Nauruz-58, Khizr-116, Timur-Khoja-2, Kildibek-5, Murid-35, indeterminate-3 (Fyodorov-Davydov, 1960, p.136-137, NN 32, 37; Archives of IIMK, fund 1, 1892, file 116, p.3-4, 6, 10-11, 15).

127. Saratov, 1900. During the building of the house close to Kazan church in a clay jug the hoard consisting approximately from 200 copper Golden Horde coins was found (Fyodorov-Davydov, 1960, p.187, N 327).

128. Saratov, 1847. Hoard from 46 silver coins of Janibek and Toktamysh was found (Fyodorov-Davydov, 1960, p.157, N 143)[91].

129. Boldyrevka. In 1983 at a pond 'Pionersky' in immediate proximity from Boldyrevskoe settlement (N 19) L.V. Petrenko found the hoard (coins were determined by Yu.E. Pyrsov) from

[91] In the archives of A.A.Krotokov dirhems were described as stroked in the period from Tokta to Janibek.

74 silver dirhems (Morzherin, 1997, p.169-170)[92]: Uzbek: Saray 717 A.H.-2, 727 A.H.-2, 732 A.H.-1, 737 A.H.-2, 739 A.H.-4; Bulgar al-Makhrusa 734 A.H.-1; Janibek: Saray al-Djedid 742 A.H.-1, 743 A.H.-2, 744 A.H.-1, 745 A.H.-1, 745 (?) A.H.-2, 746 A.H.-5, 747 A.H.-4, 748 A.H.-1, 750 A.H.-1, 751 A.H.-1, 752 A.H.-3, 753 A.H.-1; Gulistan 752 A.H.-9, 753 A.H.-4; Birdibek: Saray al-Djedid 759 A.H.-10, 760 A.H.-2, Azak 759 A.H.-1, 760 A.H.-1; Kulna: Saray al-Djedid 760 A.H.-1; Nauruz: Saray al-Djedid 761 A.H.-2; Gulistan 761 A.H.-3; Khizr: Saray al-Djedid 761 A.H.-2; Gulistan 761 A.H.-4. The coins were found together with the rests of brown unglazed vessel – common Golden Horde money-box.

130. Uvek I. In 1864 the hoard in the Golden Horde money-box, consisting of 102 silver Jochid coins was found (Ponomarev, 1879, p.330; Fyodorov-Davydov, 1960, p.182, N 271; Archives of IIMK, fund 1, 1864, file 15, p.7; Archives of IIMK, fund 1, 1895, file 122, p.6-7). Concerning the data of F.V.Dukhovnikov this and the next (N 131) hoards were found in the area of the site of ancient city, located to the north-west from modern station Pravoberezhnyy (Archives of IIMK, fund 1, 1895, file 122, p.16-17, 18).

131. Uvek II. In 1860-s the hoard of 120 Golden Horde coins was found in similar money-box (Archives of IIMK, fund 1, 1895, file 122, p.6-7).

132. Uvek III. In 1879 the hoard was found, in a jug. The hoard consisted of more than 150 dirhems (Fyodorov-Davydov, 1960, p.182, N 272).

133. Uvek IV. In 1889 also in a jug the hoard consisting of 287 silver Golden Horde coins (*Pamyatniki stariny*; Fyodorov-Davydov, 1960, p.182, N 273) was found.

134. Uvek V. In 1891 the hoard of 67 Jochid dirhems was found (Fyodorov-Davydov, 1960, p.182, N 274).

135. Uvek VI. In 1891 the hoard, consisting of 38 copper Golden Horde coins (Fyodorov-Davydov, 1960, p.187, N 328) was found.

136. Uvek VII. In 1893 the hoard of 99 silver Golden Horde coins was found (Fyodorov-Davydov, 1960, p.182, N 275).

137. Uvek VIII. In June, 1904 during the civil works the hoard of 21 copper Jochid puls (Archives of IIMK, fund 1, 1904, file 217, p.3-4) was found: Gulistan 764 A.H.-16, year? -5.

138. Uvek IX. In 1911-1912 the hoard of the Golden Horde silver coins was found (Zaykovsky, 1913-2, p.213; Fyodorov-Davydov, 1960, p.182, N 276; Fyodorov-Davydov, 1963, p.218, N 276a).

139. Uvek X. In 1912 the hoard of 974 Jochid dirhems of khans from Tokta up to Murid and Abdullah was found; the latest coins (there were 26 of them) were dated as 764 A.H. (Fyodorov-Davydov, 1960, p.136, N 35).

[92] SOMK N SMK 38324; D-876.

140. Uvek XI. In 1994 a small hoard of 12 puls of 1330-s was found: Uzbek: Saray? (with lion and sun) year? -12 (Nedashkovsky L.F. Otchet o razvedkakh k yugo-zapadu ot Saratova v 1994 godu, p.8).

141. Rybushka. In 1915 hoard of 119 silver coins and a decoration as a heart-like plate (Fyodorov-Davydov, 1960, p.157, N 141) was found. 111 coins were defined - Jochid dirhems from Uzbek up to Toktamysh, including re-coined, and imitations of them, and also denga of Vasily Dmitrievich of Moscow; the latest coin was dated as 797 A.H.

142. Mordovo I. In 1909 the vessel with 2000 silver coins was found, some coins were defined and appeared to be dirhems of Tokta and Toktamysh (Fyodorov-Davydov, 1960, p.157, N 140).

143. Mordovo II. In 1909 in 3 versts from the village in red-clay vessel on ploughed land there was found by S.A.Yurkin the hoard of 979 silver coins (KZVM, Vol.I, N 968). From this hoard 2 dirhems, described in the documents of SUAK: Uzbek: Saray 717 A.H.-1; Janibek: Saray al-Djedid 749 A.H.-1 (Archives of SOMK, fund 85, inventory 1, file 177, p.13, 43; KZVM, Vol.I, N 955) occurred.

144. Ahmat. About 1912 the hoard in a jug consisting of 900 silver Jochid coins of 710-750 A.H. (Fyodorov-Davydov, 1960, p.136, N 31) was found.

145. Tarlykovka, village of Rovensky area. In 1914 the hoard of 44 silver coins was found: Tokta: Saray al-Makhrusa 710 A.H.-1; Uzbek: Saray 727 A.H.-1, 739 A.H.-1, year? -1; Janibek: Saray al-Djedid 743 A.H.-1, 745 A.H.-2, 746 A.H.-4, 747 A.H.-9, 748 A.H.-1, 751 A.H.-3, 753 A.H.-1, 755 A.H.-1, 756 A.H.-1; Gulistan 752 A.H.-1, 753 A.H.-1, 754 A.H.-4, 756 A.H.-1; Khorezm 743 A.H.-1, 751 A.H.-1; Bardzhin 753 A.H.-1; Tebriz 751 (?) A.H.-1; Birdibek: city? year? -3; Nauruz: city? year? -2; Murid city? year? -1 (Fyodorov-Davydov, 1960, p.136, N 34; Fyodorov-Davydov, 1963, p.194, N 411; Archives of SOMK, fund 85, inventory 1, file 177, p.25-26, 32, 34, 37-41, 46-52).

146. On a settlement near the village Shumeyka (N 52) in 1996 the hoard was found. It consisted of 129 Jochid dirhems (Barinov, 1997-2, p.250). The earliest coin of the hoard was dated as 722 A.H. (1322), the latest – as 765 A.H. (1363-1364).

From 21 hoards 19 (90.5%) were found on the right bank of the Volga and only 2 (9.5%) - on the left bank.

§ 3.6. Separate finds of coins

147. Chardym. On southern outskirts of the village the silver coin of Uzbek was found: Saray 722 A.H.-1 (GASO, fund 407, inventory 2, file 652a, p.133).

148. Naberezhnaya Kosmonavtov in the Volga district of Saratov. Near Babushkin Vzvoz on the sand-bar in 1975 17

Golden Horde puls[93] were found: Uzbek: Saray 726 A.H.-1; Janibek: Saray al-Djedid without date (with double-head eagle) -3; without date (with flower) -4; Khizr: Saray al-Djedid 762 A.H.-4; Gulistan 762 A.H.-3; an anonymous coin of the period of the internecine wars: Gulistan 766 A.H.-1; Toktamysh: Saray 787 A.H.-1. Near the quay, at the corner of modern streets Chernyshevskogo and Nekrasova, 'the tatar coins came across' (Archives of SOMK, fund 85, inventory 1, file 89, p.185). It is possible, that before just here inside the limits of Saratov 2 copper Golden Horde coin were found (KZVM, Vol.I, N 978/2).

149. Esipovka. It is a former village, nowadays settlement in Zavodskoy district of Saratov. In 1901 'in a mountain near the village' a Jochid dirhem (Fyodorov-Davydov, 1963, p.192, N 388; Archives of SOMK, fund 85, inventory 1, file 89, p.78; KZVM, Vol.I, N 235) was found.

150. Knyazevka. It is a former village, nowadays settlement in Zavodskoy district of Saratov. There are data about finds of silver and copper Golden Horde coins (GASO, fund 407, inventory 2, file 652a, p.135).

151. The farm Studensky (it was situated in present Krasnoarmeysky area). In 1890-s a Jochid dirhem (Fyodorov-Davydov, 1963, p.190, N 375; KZVM, Vol.I, N 416) was found here.

152. Privol'noe, village of Rovensky area. The silver coin of Janibek was found: Saray al-Djedid 745 A.H. (Fyodorov-Davydov, 1963, p.197, N 430).

153. Voskresenka, village of Engels area. In 1977 silver dirhem of Tokta, with a name of an-Nasir lid-Din-Allah (Archives of SOMK. Fund of D.S.Khudyakov) was found.

154. Berezovka. In 10 versts to the east from the village in 1906-1908 3 silver and 18 copper Golden Horde coins of the period from Uzbek up to Toktamysh (Fyodorov-Davydov, 1963, p.192, N 383) were found.

155. Uzmor'e. On the road to Pokrovskaya suburb (nowadays Engels) in the beginning of the XXth century Jochid dirhems and puls with dates from 710 up to 764 A.H. (Fyodorov-Davydov, 1963, p.195-196, N 415) were found.

156. Pokrovskaya bay. In the beginning of the XXth century in the sand taken from the bottom, the copper coin of Janibek was found: Bardzhin 753 A.H. (Fyodorov-Davydov, 1963, p.196, N 426).

157. Pokrovskaya suburb. Jochid dirhem (KZVM, Vol.II, N 2225) was found. In 1970s-1980s in Engels 4 Jochid puls were found, 2 of them were defined: Janibek: Saray al-Djedid 752 A.H.-1, year? (with double-headed eagle) -1 (Archives of SOMK. Fund of D.S.Khudyakov).

158. Saratovka, the river in Engels area. In the beginning of the XXth century 3 silver and 3 copper coins of khans Tuda-Mengu, Uzbek and Timur-Khodzha (Fyodorov-Davydov, 1963, p.194, N 409) were found.

159. Osinovka, village of Engels area. In the village a pul of Janibek: Saray al-Djedid(?) 75? A.H. (Archives of SOMK. Fund of D.S.Khudyakov) was found.

From 13 places of separate finds of Jochid coins 5 (38.5%) settle down on the right bank of the Volga, and 8 (61.5%) - on the left bank.

The important question is the investigation of the chronology of monuments, the consideration of stages of foundation and development of the Golden Horde Ukek neighbourhood.

The best dating material, available at our disposal, are Jochid coins (they are present in 62 of the materials from the 159 monuments described above). The quantity of coins is not big – not more than 4 times less than from Uvek site of ancient city (Appendix 2, tab.10-11), not taking into account hoards, being a completely special type of numismatic sources; it may be explained by much more active monetary circulation in the large city, than on periphery. Nevertheless, numismatic material allows, basing on stages of the monetary circulation in the Golden Horde (see Mukhamadiev, 1983; Fyodorov-Davydov, 1960, 1963), confidently allocate four basic stages of development of Ukek neighbourhood. The first stage - from 1266[94] to 1310 (from the beginning of Mengu-Timur's reign up to Tokta's reform), second – from 1310 approximately to 1365 (from Tokta's reform to the beginning of mass cutting of the old dirhem and decrease of new coins weight), third - from 1365 to 1380 (period of heat of internecine wars in Ulus Jochi), and the fourth from 1380 to 1395 (Toktamysh reign).

Coins, stroked in the first period (1266-1310), were found on 12 monuments (NN 1, 11, 13, 29, 33, 41, 44, 50, 53, 83, 153, 158). The earliest precisely dated coins concern to the period from 1273-1287 - to the end of Mengu-Timur reign and to Tuda-Mengu reign (NN 1, 50, 53, 83, 158). In 6 cases (NN 1, 13, 33, 41, 44, 153) the finds of coins of Tokta epoch (1291-1312) were made. On the basis of this material it is possible to assert, that regions of the Golden Horde Ukek developed in the last quarter of the XIIIth - beginning of the XIVth century. However, as in 1260-s - 1280-s, as in reigns of Tokta and Uzbek, the circulation of Jochid dirhems in Ukek was more advanced, than in its regions (see tab.1, 10), in which, nevertheless, the coins of local striking (tab.11) were circulated also.

Finds of coins and hoards of the second stage (1310-1365) cover 39 objects (NN 1, 16-18, 29, 40-41, 43-45, 47, 50-53, 72, 77, 85, 100, 113, 124, 126, 129, 137, 139-140, 143-148, 152, 154-159), and on 20 of them (NN 16-17, 40-41, 44-45, 47, 50, 53, 100, 113, 126, 129, 137, 139, 145-146, 148, 155, 158) the finds of coins of an initial period of internecine wars - 1359-1365 were marked. From all this it follows, that the period of heyday of Ukek regions, as well as period of heyday of the Golden Horde as a whole, dates to time of reign of Uzbek

[93] SOMK N SMK 53498/1-17.

[94] Only 2 coins of 1250-s - first half of 1260-s, found on the Ukek site of ancient city and on the settlement near the village Sovetskoe are known. That's why it would be better to display the first period only from 1266.

Table 10. Distribution of Jochid coins from the Ukek regions according to the periods of monetary circulation.

	Silver		Copper		Total	
	abs.	%	Abs.	%	abs.	%
Arig-Buga (1259-1264)	1	1.9	-	-	1	0.3
Mengu-Timur, Tuda-Mengu and Tula-Buga (1266-91)	4	7.5	-	-	4	1.1
Tokta (before 1310-11)	5	9.4	-	-	5	1.4
Tokta (from 1310-11)	2	3.8	-	-	2	0.6
Tokta in general (1291-1312)	7	13.2	-	-	7	1.9
Uzbek (1312-42)	11	20.8	115	36.7	126	34.4
Janibek (1342-57)	15	28.3	134	42.8	149	40.7
Khans of the period of internecine wars (1357-80)	15	28.3	56	17.9	71	19.4
Toktamysh (1380-96)	-	-	8	2.6	8	2.2
Total	53	100	313	100	366	100

Table 11. Distribution of Jochid coins from the Ukek regions according to the mints.

	Silver		Copper		Total	
	abs.	%	abs.	%	abs.	%
Saray	8	17	108	35.2	116	32.8
Saray al-Makhrusa	4	8.5	2	0.7	6	1.7
Saray al-Djedid	14	29.8	139	45.3	153	43.2
Gulistan	1	2.1	34	11.1	35	9.9
Ukek	4	8.5	2	0.7	6	1.7
Mokhsha	2	4.3	3	0.9	5	1.4
Bulgar	2	4.3	1	0.3	3	0.8
Bardzhin	-	-	5	1.6	5	1.4
Crimea	-	-	3	0.9	3	0.8
Azak	12	25.5	-	-	12	3.4
Khorezm	-	-	7	2.3	7	2
Haji-Tarkhan	-	-	1	0.3	1	0.3
Orda	-	-	2	0.7	2	0.6
Total	47	100	307	100	354	100

(1312-1342) and Janibek (1342-1357), and at an initial stage of internecine wars decline was not so catastrophic, as on the following, third stage. Dirhems of 1342-1365 (only one coin of internecine wars period is dated as later time - 774 A.H.) make 56.6% of all silver coins from Ukek regions, whereas for the city this figure makes only 42.4%. The development of puls circulation in Ukek regions also differs from those of Uvek site of ancient city: the share of coins of Uzbek on monuments of the neighbourhood is bigger, and share of copper coins, stroked in Janibek time and in period of internecine wars - smaller. There is a very interesting numismatic complex of one of burials (N 100), containing 11 silver coins only of Azak coinage, and 6 of them may be related to Abdullah coinage 765 A.H. (1363-1364). The author believes that this burial with such unusual for the monetary circulation of the Volga region set of coins (in Ukek the coins of 'Saray' khans prevail) may be connected to events of a political History - with attempts of Mamay to grasp the Volga region cities in the first half of 1360-s.

Coins of the third period (1365-1380) were found only on 3 monuments (NN 17, 29, 154), apart from Uvek site of ancient city - one coin per each. Monetary hoards of the third, as well as of the first stages were not found. Hence, it is possible to assume that it was time of significant desolation of described territory, of economic crisis caused by decades of internecine wars.

Coins and hoards of the fourth stage (1380-1395) were met in 9 cases (NN 1, 19, 29, 44, 128, 141-142, 148, 154), 3 of them - hoards, and 2 individual finds. Besides Uvek site of ancient city coins of this time were found only on 3 settlements. We can conclude, that the economic rise of Toktamysh epoch was not so significant, though it took place

in Ukek regions: the share of puls of this time in Ukek neighbourhood is higher, than on the site of ancient city, though dirhems out of hoards were not found at all. It is important that the latest Jochid coin found in considered area (N 141) is dated as 797 A.H. (1395) - year of ruin of the Volga region cities by Tamerlane, with which we can connect final decline and destruction not only of Ukek, but also settlements surrounding it.

The geographical position of the monuments of Ukek neighbourhood at various stages of its development is also interesting. At the first stage 6 (50%) from 12 monuments dated by coins, were situated on the left bank of the Volga (fig.90). In the second period the monuments of the left bank region even quantitatively prevail above monuments of the right bank region, where only 17 (43.6%) from 39 objects settled down (fig.91). The situation greatly changed (fig.92) at the third and fourth stages (they should be considered together in view of small number of known monuments - 10): on the left bank of the Volga only 2 (20%) objects were revealed, and on the right bank- 8 (80%).

It is obviously possible to connect the quantitative prevalence of monuments on the left bank region of the Volga above monuments of the right bank region (where city Ukek was situated) at the second stage (in 1312-1365) with town-planning policy of the Golden Horde khans: while khan authority was strong, the settlements on the left bank functioned. They were situated on the route of the khan's court wanderings in the second half of the XIIIth - middle of the XIVth century. When khan's authority weakened, the court wandered only in the Low Volga (Fyodorov-Davydov, 1994; p.12) - at the third and fourth stages, in 1365-1395 - life in the Ukek district appeared almost only on the right bank of the Volga, mainly only in the nearest neighbourhood of the Golden Horde Ukek, closely connected with it economically.

The fact of special interest is the following. On the monuments of Ukek regions there are a lot of Old Russian and ancient Mordvin materials.

Old Russian materials were found on 16 (30.2%) from 53 settlements studied by us (NN 1, 4, 9, 11, 15, 18-19, 27, 29-30, 33-35, 44, 50, 52); Old Russian pottery comprises on this settlements from 1.3% (N 29) up to 50% (NN 34-35) of all ceramic materials. Old Russian materials were revealed also on one of the sites (60), and also in a complex of one barrow (118). This data testify to presence of an appreciable share of Old Russian population not only in Ukek, but also on a part of the Golden Horde settlements in its neighbourhood (fig.82,A).

It is necessary to note also the presence of Mordvin materials on 4 (7.6%) settlements (NN 1, 4-5, 29). However they are not so numerous, as Old Russian and were found only on the right bank of the Volga (and only in northern and central parts of considered area, - closer to actually Mordvin monuments of the XIIIth - XIVth centuries, for example, Atkarsky burial ground). Two finds of syul'gamas were revealed in the barrow group at the village Zaumor'e (N 113), on the left bank of the Volga, and one - in the barrow at the village Bol'shaya Dmitrievka (N 104), on the Karamysh.

CONCLUSION

We have studied the available written, numismatic and, partially (within the framework stated in the introduction), archaeological sources about the Golden Horde Ukek and its regions. This research allows to make some preliminary conclusions about both material and spiritual culture of Ukek.

Nowadays the necessity of the detailed study of material culture of the Golden Horde city is obvious. To varying extents the different categories of finds were already repeatedly examined in special researches. However the questions of detailed chronology (dating within the Golden Horde period itself) remain not fully investigated, though it is obvious that during more than 150-year's existence of Ulus Jochi separate elements of material culture could not remain constant.

Below we shall give only a brief characteristic of separate categories of bronze articles from Uvek site of ancient city - wearing-apparel components, mirrors and some household things, which can preliminarily be dated narrower than from the middle of the XIIIth till the end of the XIVth century. Here only the articles, mainly elevated material from the monument, dated by analogies - mainly by coins and finds in precisely dated layers are mentioned.

The material available is represented by the following articles (some of the dating is approximate):

1) Syul'gama of type 3 (1225 -1255).
2) Kolt and fragments of cast bronze vessels (XII century - 1310).
3) Mirror E1 (XII century - 1365).
4) Plate 2AIII (1250-1350).
5) Mirrors A5 (1270-1365).
6) Plate 2AVIb (1290-1340).
7) Mirror A9 (1290-1350).
8) Plates 2BII (1300-1350).
9) Key of type 2 (1300-1450).
10) Plate 2BIII (1320-1360).
11) Large figured plates of type 2, mirrors A1 and girdle clasps 2BI-II (1330-1370).
12) Bracelet A1 (1330-1390).
13) Springs for bronze snaps (1340-1360).
14) Mirrors A2 (1340-1365).
15) Snaps of type 2 (1340-1370).
16) Mirror D5 (1340-1400).
17) Mirrors A3 (1340-1410).
18) Syul'gama of type 1, mirror B4 and bronze article having the form of a stirrup with three semicircular ledges (1355-1365).
19) Fingering A2, bracket 2AVc (1380-1400).
20) Girdle clasp- strap divider, plates 2AIII, 2AVIIb, snap of type 1, bracelets of types A2, C1 and C3, mirror A4b, eyelet of a cross-enkolpion (1250-1300).
21) Plates AVIIIb, 2AVb, fingering A1, temporal ring of type 2, mirrors of types A4a, A8 and B3, lids of bronze vessels, top parts of which are decorated with convex sockets of 8 or 9 'petals' and with small handles - plates at the centre, bolster-like candlestick from khoros (1300-1400).

The articles considered as a whole have a wide chronological range, but their distribution within the framework of the Golden Horde period is irregular. This unevenness we tried to present as follows: to divide all Golden Horde epoch into 3 equal periods - 1) 2nd half of the XIIIth century 2) 1st half of the XIVth century 3) 2nd half of the XIVth century.

From the first period (1250-1300) 17 types of articles[1] come (24% from a total sum of types in all three periods), on the second (1300-1350) - 28 types (39%), on the third (1350-1400) - 27 types (37%). These data can, to some extent, speak about the dynamics of life of the Golden Horde Ukek in various periods of its History.

Chronological distribution of separate categories of a wares is also interesting.

5 types of details of a belt set are dated by the first period, 7 types – by the second, and only 4 types by the third. It's

[1] If the 'narrow' date of the article existence in Medieval material culture was out of the framework of the period, that article was considered repeatedly - in each period when it could be spread.

evident that the greatest distribution this type of finds had in the first half of the XIVth century - in the epoch of the great heyday of the Golden Horde. However belt ornaments were probably more spread in the 2-nd half of the XIIIth century than in the 2-nd half of the XIVth century. This phenomenon can be explained by general recession of manufacture of belt set in the 2-nd half of the XIVth century (for example, judging by the data of M.V.Sedova in Novgorod in layers of this time, only 2 details of belt set were found!).

From all mirrors only 4 types can be related to the 2-nd half of the XIIIth century; 10 types - to the 1-st half of the XIVth century, 10 types - to the 2-nd half of the XIVth century. The mirrors were much wider spread in the XIVth than in the XIIIth century and articles with narrow high rim (Section A) - the most numerous type of the Golden Horde mirrors - occurred, probably, not earlier then the 70-s of the XIIIth century and completely disappeared not earlier then 1410.

From ornaments (except the belt ones) 5 types fall on the first period, 4 - on the second and 5 - on the third. It suggests approximately equal existence of these categories of bronze articles during the whole Golden Horde period. During the time only their types changed.

The household articles (vessels, details of bags, locks and keys, attributes of Orthodox cult, bronze articles) were allocated as follows: on the first period - 3 types, on the second - 7 types, on the third - 7 types. Thus there is a steady growth of importance to the Golden Horde Ukek of articles of this set, which consists of elements, most characteristic for city, settled, culture.

The period of the most active economic life of Ukek, judging by numismatic materials, falls to the century from 1270 to 1370. Only 3 types of articles from all examined completely drop out of this interval, and 8 - only partially leave this limits (NN 20-21 in this calculation were not taken into account because these finds have not strict chronological binding and are dated as the XIIIth and the XIVth century respectively); these 12 types make less than one third of general set. This proves accuracy of dating on the base of numismatic materials, and, for some extent right of the described above method of chronological constructions.

There are a lot of data about material culture of Ukek and its neighbourhood, but some spheres of spiritual culture are not clear. Nevertheless some conclusions about spiritual culture of the city population we shall make.

Judging by inscriptions on ceramics, bronze mirrors and other articles, in Ukek, as well as in all Golden Horde, the Arabic and Persian literary languages were well known. However population of the city obviously communicated among themselves not in them, but in Turkic, Finno-Ugric and Old Russian languages. It is necessary to note the role of Mongolian language, which, alongside with Arabic, was used for drawing up of inscriptions on coins which were the unique textual sources issued in large numbers at that time.

Actually no textual documents in our today's understanding, remained from the Golden Horde Ukek (sole three-sheet charter on parchment (?), found at the end of the XIXth century, was unfortunately lost). However in 1930 on the left bank of the Volga opposite Uvek, at the village Podgornoe, in burial of penman the whole book written on the birch-back was found. The well-preserved part of the document represented a poetic story in the Mongolian language, which has been written down by Uighur script in the beginning of the XIVth century.

As to the religions spread in Ukek and its regions, this question is obviously connected to a question about ethnic structure of their population. The significant part (may be the majority) of townspeople in the middle of the XIVth century professed Islam. Judging by numerous finds of crosses, stone and bronze icons, details of khoroses (incensories), the Christianity was widespread. It came from the territory of Rus together with the Slavic population. Local Finno-Ugric (basically probably Mordvin) population mainly continued probably to keep traditional tribe creeds (about presence of this population the finds of clothes clasps-syul'gamas and hand-made pot-like crockery say). The Mongolian aristocracy of Ukek, ruled at least up to the third decade of the XIVth century, judging by finds of metal figures of the person ('iltakhans', symbolising soul and attached to ongons - images of Mongolian deities) and on other features of material culture, kept their shamanistic creeds.

The presence among the highest social layers of Ukek of a significant number of comers from Central Asia is proved by archaeological data: 16 rich burial places were excavated. All of them were oriented with the head to the north – north-east and were supplied with rich stock: gold and silver ornaments, including belt ones; silver and wooden crockery. The buried persons were buried in silk clothes sewed with gold and in leather footwear; in female burial places the rests of Mongolian hats-bokkas were found. Burials were made in wooden coffins in brick crypts. All burial places it is possible to date as the end of the XIIIth - first half of the XIVth century.

A lot of attributes – position of burial ground on the south-east slope of a mountain, its compactness and small number of burial places, variety of stock, orientation of buried persons to the north – north-east, the presence of the brick pavement with the strongly displaced centre above some graves - pulls together Ukek necropolis with Mongolian burial grounds of Central Asia (Imenokhoev, p.27-30).

Regarding the social structure of the city population it is necessary to add that besides the ordinaries of the handicraftsmen and farmers on the one hand, and also the highest civil and military nobles on the other, there were obviously a lot of intermediate elements.

The merchants were one of them. More than 1450 registered finds of individual coins,11 monetary hoards found in this territory, and also articles of obviously not local manufacture testify to the scope of trade in Ukek.

The special layer made warriors, whose professional top together with the highest civil officials, made the site of ancient city aristocracy who ruled the city and its regions.

Despite the significant work done by the researchers in studying Uvek site of ancient city, the significant part of all archaeological collections from this interesting monument remains not entered to the research circulation. This work on study of Uvek's materials from collections of museums of Saratov, Kazan, Moscow and St.-Petersburg (besides there are archival data of the transfer of small collections from Uvek to the Baku Society of Inspection and Study of Azerbaijan and to Vitebsk Research Archival Commission) it is necessary to consider as one of the most important tasks in study of the Golden Horde Ukek.

Another not less important task is the renewal of the archaeological excavations on the Uvek site of ancient city that stopped 80 years ago. The excavations may help to find out historical and social topography of the city, time of erection of its fortifications, etc.

The third, but is thought to be prime, task should be the constant supervision over construction works carried out in the area of stations Pravoberezhnyy and Neftyanaya, and in the future the complete prohibition of all civil work in the territory of the site of ancient city.

And, at last, it is possible to allocate the fourth task – the research of Ukek neighbourhood, which, unfortunately, still remains insufficiently investigated.

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THE LIST OF ABBREVIATIONS:

AEMK - Arkheologiya i etnografiya mariyskogo kraya (Archaeology and ethnography of Mari land). Yoshkar-Ola. Mariysky NII,

AKM - Azovsky kraevedchesky muzey (Azov museum of regional ethnography),

AKU - Arkheologicheskie kollektsii (Kazanskogo) universiteta (Archaeological collections of Kazan State University),

AMZ - Astrakhansky muzey-zapovednik (Astrakhan museum-reserve),

AO - Arkheologicheskie otkrytiya (Archaeological discoveries). Moscow,

AVES - Arkheologiya Vostochno-Evropeyskoy stepi (Archaeology of the East-European steppe). Saratov. Izdatel'stvo Saratovskogo universiteta,

BGIAZ - Bolgarsky gosudarstvennyy istoriko-arkhitekturnyy zapovednik (Bolgar state historical-architectural museum-reserve),

DVDS - Drevnosti Volgo-Donskikh stepey (Antiquities of the Volga-Don steppes). Volgograd,

EKM - Engel'ssky kraevedchesky muzey (Engels museum of regional ethnography),

GAIMK - Gosudarstvennaya akademiya istorii material'noy kul'tury (State Academy of the History of material culture),

GASO - Gosudarstvennyy arkhiv Saratovskoy oblasti (State Archive of the Saratov region),

GE - Gosudarstvennyy Ermitazh (State Hermitage). St. Petersburg,

GIM - Gosudarstvennyy istorichesky muzey (State Historical museum). Moscow,

IA RAN - Institut arkheologii Rossiyskoy Akademii Nauk (Institute of Archaeology of the Russian Academy of Sciences). Moscow,

IIMK - Institut istorii material'noy kul'tury RAN (Institute of History of material culture of the Russian Academy of Sciences). St. Petersburg,

INVIK - Izvestiya saratovskogo Nizhne-Volzhskogo instituta kraevedeniya (News of the Saratov Low Volga institute of regional ethnography). Saratov. Saratovskoe kraevoe izdatel'stvo,

IOAIE - Izvestiya Obshchestva arkheologii, istorii i etnografii (pri Kazanskom universitete) (News of the Society of Archaeology, History and Ethnography at Kazan University). Kazan. Izdatel'stvo Kazanskogo universiteta,

KOMK - Kirovsky Oblastnoy muzey kraevedeniya (Kirov regional museum of regional ethnography),

KSIA - Kratkie soobshcheniya o dokladakh i polevykh issledovaniyakh Instituta arkheologii AN SSSR (Short abstracts of reports and field investigations of the Institute of Archaeology of Academy of sciences of USSR). Moscow,

KSIIMK - Kratkie soobshcheniya o dokladakh i polevykh issledovaniyakh instituta istorii material'noy kul'tury AN SSSR (Short abstracts of reports and field investigations of the Institute of History of material culture of Academy of sciences of USSR). Moscow-Leningrad, Moscow,

KZVM - Kniga zapisi veshchey muzeya (SUAK) (The register of objects of the museum (SUAK)),

MAK - Materialy po arkheologii Kavkaza (Materials on the Archaeology of Caucasus). Moscow,

MIA - Materialy i issledovaniya po arkheologii SSSR (Materials and researches on the Archaeology of the USSR). Moscow-Leningrad,

NE - Numizmatika i epigrafika (Numismatics and epigraphy). Moscow,

NMRT - Natsional'nyy muzey Respubliki Tatarstan (National museum of the republic of Tatarstan). Kazan,

NV - Novyy Vostok (New East). Moscow. All-Russian research association of Oriental studies,

OAIE - Obshchestvo arkheologii, istorii i etnografii pri Kazanskom universitete (Society of Archaeology, History and Ethnography at Kazan University),

OAK - Otchet Arkheologicheskoy komissii (Report of the Archaeological Commission). St. Petersburg - Petrograd,

OIAE - Obshchestvo istorii, arkheologii i etnografii pri Saratovskom universitete (Society of History, Archaeology, and Ethnography at Saratov University),

RA - Rossiyskaya arkheologiya (Russian Archaeology). Moscow,

RAO - Russkoe arkheologicheskoe obshchestvo (Russian Archaeological Society),

SA - Sovetskaya arkheologiya (Soviet Archaeology). Moscow,

SAI - Svod arkheologicheskikh istochnikov (The Code of Archaeological sources). Moscow,

SGE - Soobshcheniya Gosudarstvennogo Ermitazha (Reports of the State Hermitage). Leningrad,

SGU – Saratovsky gosudarstvennyy universitet (Saratov State University),

SL - Saratovsky listok (Saratov leaflet). Saratov,

SOMK - Saratovsky Oblastnoy muzey kraevedeniya (Saratov regional museum of regional ethnography),

SUAK - Saratovskaya uchenaya arkhivnaya komissiya (Saratov Research Archival Commission),

TNVONOK - Trudy Nizhne-Volzhskogo oblastnogo nauchnogo obshchestva kraevedeniya (Transactions of Low Volga region Research Society of regional ethnography). Saratov,

TSUAK - Trudy Saratovskoy uchenoy arkhivnoy komissii (Transactions of Saratov Research Archival Commission). Saratov,

VOKM - Volgogradsky Oblastnoy kraevedchesky muzey (Volgograd regional museum of regional ethnography),

ZNU - Zapiski Novorossiyskogo universiteta (Papers of Novorossiysky University). Odessa,

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Fig.11. Photo of the finds of the beginning of XXth century from Uvek site (Photo archives of IIMK, No II 32428-430).

Fig.12. Photo of the ceramic finds of the beginning of XXth century from Uvek site (Photo archives of IIMK, No II 32428-430).

Fig.13. Photo of the glass, kashi and cornelian beads from the finds of F.V.Dukhovnikov of 1893 from Uvek site (GIM, No 34162, op.952, No 22).

Fig.14. Coins of Ukek strike (1-22 - silver, 23-24 - copper).

Fig.15. Ukek dirhems of type 1; obverse (GE, No 15308-15310).

Fig.16. Ukek dirhems of type 1; reverse (GE, No 15308-15310).

Fig.17. Ukek dirhem of type 1; obverse (GE, No 15312).

Fig.18. Ukek dirhem of type 1; reverse (GE, No 15312).

Fig.19. Ukek dirhem of type 1; obverse (GE, No 15365).

Fig.20. Ukek dirhem of type 1; reverse (GE, No 15365).

Fig.21. Ukek dirhem of type 1; obverse (GE, No 15586).

Fig.22. Ukek dirhem of type 1; reverse (GE, No 15586).

Fig.23. Ukek dirhem of type 1; obverse (GE, No 15587).

Fig.24. Ukek dirhem of type 1; reverse (GE, No 15587).

Fig.25. Ukek dirhems of type 1; obverse (GE, No 15588-15589).

Fig.26. Ukek dirhems of type 1; reverse (GE, No 15588-15589).

Fig.27. Ukek (?) dirhems of type 8; obverse (GE, No 24688-24689).

Fig.28. Ukek (?) dirhems of type 8; reverse (GE, No 24688-24689).

Fig.29. Ukek (?) dirhem of type 8; obverse (GE, No 24690).

Fig.30. Ukek (?) dirhem of type 8; reverse (GE, No 24690).

Fig.31. 1-2 - weight diagrams of Ukek dirhems of types 1 and 2, 3 - cartography of finds of Ukek coins.

Fig.32. Details of a silver belt set from the burial 4 of mausoleum, excavated in 1913 (SOMK. General museum N SOMK D3-23).
1 - N SMK 42239, 2 - N SMK 42237, 3 - N SMK 42232, 4 - N SMK 42233, 5 - N SMK 42234, 6 - N SMK 42238, 7 and 8 - N SMK 42240.

Fig.33. Buckles, belt rings and tips of belts (13 - iron, others - alloys on a copper basis).
1-6, 12-17 – SOMK NN SMK 52573, 1309/5, NVSP 28704, 1309/2, NVSP 29772, SMK 52574, NVSP 29771, NVSP 28703, NVSP 28708, 1220/4, 1223, 1040/1-2.
7-11 - NMRT NN 5365-64 and 5365 (7).

Fig.34. Brackets and stripes (1-21,24,27-33 - bronze, 22 - bone and iron, 23 - stone, 25 - iron, 26 - bone).
1-2, 4, 6-9, 11-12, 13b-20, 23-25, 28-33 - SOMK NN 1252/1 (1,12a, 20), 1229, NVSP 27822, SMK 52027, SMK 52032, SMK 39853, 1222/6, SMK 52021, NVSP 28714, SMK 52038, 1219/1 (13d, 19), NVSP 27840, SMK 52040, SMK 52028, 1309/4, SMK 52037, SMK 52022, NVSP 31371, SMK 52023, NVSP 28707, SMK 52024, NVSP 28712, 1223, NVSP 30219, 1043/1 (31-32), NVSP 29777.
3, 5, 13a, 21, 26-27 - NMRT NN 5365-64 (3,27), 5365 (5,13a), 5365-32, 5365-63.
10, 22 - Archaeological club-museum at the Saratov regional station of young tourists.

Fig.35. Bronze temple rings (1-4), earrings (5-11), kolt (12), finger rings (13-23) and bracelets (24-33).
1-3, 11, 13-14, 16, 19-22, 26, 29, 32-33 - SOMK NN 1040/1,2; NVSP 23302 (SUAK 1014, AO 269/7); SMK 52031 (A - 2317, AO 168); SMK 60705; 1040; 1251; SMK 52026 (A - 2312, AO 266/5); 1229; NVSP 28706 (AO 263/4); SMK 52030 (A - 2316, AO 168/5); 1223; SMK 43924; NVSP 28701 (SUAK 1045, AO 262/1); NVSP 29937 (SUAK 1045/15); 1245.
4-5, 17-18, 23, 27 – GE NN ZO-153, 7273,15, V.B.c.1684; ZO-143; ZO-148, 7273,8a; ZO-150, 7273,8b; ZO-388; ZO-161, 7273,189.
6 - GIM N 34162, inventory 952, N 32.
7-10 - Archaeological club-museum at the Saratov regional station of young tourists.
12, 15, 24-25, 28, 30-31 - NMRT NN 5365-64 (everything, except for 31; 12 - OAIII-18), 5365-32 (31 - OAIII-17).

Fig.36. Bronze syul'gamas (1-8), fragment of vessel's handle (9), gilded eyelet from enkolpion with green and red enamels (10), halves of locks (11, 13), lock (12) and mirror (14).
1-9, 11-14 - Uvek, 10 - Hmelevskoe I settlement.
1-7, 10 - SOMK NN 1220/1, 1229, 1309/1, NVSP 28695 (AO 262), SMK 65558.
8, 11-14 - GE NN ZO-152, 7273,13; ZO-165a,b, 7273,55; ZO-166a,b; ZO-164; ZO-141, inventory III, 1471.
9 - NMRT N 5365-64.

Fig.37. Bronze mirrors with copper oxides.
1-3, 10 - NMRT N 5365-7, AA7-54, old NN 13277, 13278, 20689; AA7-57?, old N 13273.
4-9, 11-12 - SOMK NN SMK 52034/A-2320 (AO 295); SMK 52445/A-2370 (AO 301); AO 97?; AO 972; AO 973; SMK 52033/A-2319 (AO 294); NVSP 31164; SMK 57913 (AO 289).

Fig.38. Bronze mirrors. GIM N 34162, inventory 952, NN 35-38, 40.

Fig.39. Mirrors from an alloy of grey-steel colour (1, 3-7, 9-10) and with copper oxides (2, 8).
1, 3, 5-6, 8-10 - SOMK NN AO 2897; NVSP 28299 (AO 287); NVSP 28298 (AO 286); AO 974; SMK 57812 (SUAK 120, AO 285); NVSP 31367; SMK 57912.
2, 4, 7 - NMRT N 5365-7, inventory N 6302, old N 18506 and without additional NN.

Fig.40. Mirrors from an alloy of grey-steel colour (1, 5, 7, 13) and with copper oxides (2-4, 6, 8-12).
1, 4, 9, 11-12 - SOMK NN NVSP 31413; NVSP 31162; SMK 57916 (AO 299); NVSP 30981 (AO 579); SMK 57950 (SUAK 2441/10, AO 327/8); 2-3 - find of 1994.
5-8, 10, 13 - NMRT N 5365-7, old N 22689, AA8-24, inventory N 6355, old N 18507 and without additional NN.

Fig.41. Spears (1-3), a fragment of a mace-head and its reconstruction (4a-b), kisten (5).
1-3, 5 (iron) - NMRT NN 5365-1 (inventory 1770), 13318, 5365-4, 5365-23.
4 (bronze) - SOMK N 1222/6.

Fig.42. Iron axes.
1-4, 7-8 - NMRT N 5365-10, inventory NN 1807, 1821, 1815, 1813, 1809, 1812.
5-6 - SOMK NN NVSP 53475, 53476 (A-2423, 2424; AO 311, 312).

Fig.43. Iron dagger (1), knifes (2-4) and bunchuk (5).
1-5 - NMRT NN 5365-2, 5365-23 (inventory NN 1793-1794), 5365-25, 5365-28, 5365 (OAIII-59).

Fig.44. Iron stirrups.
1-4 - NMRT N 5365-16, inventory NN 1764, 1763 and without inventory NN.

Fig.45. Iron horseshoes (1-3) and ice-walking thorn (4).
1-2, 4 - NMRT N 5365-24, inventory NN 1765-1766, 1728.
3 - SOMK N NVSP 29906 (AO 316/3).

Fig.46. Arrowheads (1, 9-14), a fragment of a dagger (2), a top of a helmet (3), an armour plate (4), ice-walking thorns (5-7), a part of stirrup (8).
1 - bone, 2 - iron and fabric, 3-14 - iron.
1,4 - Podgornoe, 2-3,6-8 - Uvek, 5,9-10 - Podstepnoe, 11,12-14 - Hmelevskoe I settlement.
1,4,11 - Research Archaeological laboratory of the Saratov State University.
2 - NMRT N 5365-32 (old N 278).
3,5-8,12-14 - SOMK NN 1247, NVSP 22255 (AO 870/4), NVSP 34032 (AO 992?), 1040, excavations of 1999 (inventory NN 3, 12) and 2000 (inventory N 79).
9-10 - EKM N 8408 and without number (find of 1984).

Fig.47. Ceramic bomb from the Uvek site. GE N ZO-365, reg. N 58717.

Fig.48. Stone cannon bawl (1) and ceramic bombs (2-4) from the Uvek site. SOMK NN NVSP 18054 (SUAK 170); NVSP 17683 (AO 990); NVSP 31247 (SUAK 1014/21); 1647/3.

Fig.49. Bronze vessels and their parts.
1-12 - rivets, 13 - eyelet, 14-15 - walls, 16 - flask, 17-18 - lids, 19 - bottom.
1-11,14,16 - SOMK NN 1223; 1229; NVSP 18037 (SUAK 1776); 1220; 1222/6; 1228 (old N 1851); NVSP 29781 (SUAK 2360/4; AO 288).
12-13,15,17-19 - NMRT NN 5365-32; 5365-20 (AA 40-16); 5365-7 (old N 20689); 5365-30, OAIII-20, old N 18439.

Fig.50. Bronze lid of a vessel with silver incrustation, bought by F.V.Dukhovnikov in Uvek in 1893 (Photo archives of IIMK, No II 78488).

Fig.51. Cast-iron vessels.
1 - NMRT N 5365-30, inventory N 1768, old N 12734.
2-5 - SOMK NN 1040, 919, 1310 and without N.

Fig.52. Silver bowl from burial 1 (in crypt) of Uvek mausoleum, excavated in 1913 (by Krotkov, 1915, p.121, photo 8).

Fig.53. Silver small bowl from burial 5 of Uvek mausoleum, excavated in 1913 (by Krotkov, 1915, p.125, photo 14).

Fig.54. Silver gilded bowl from burial in crypt on Uvek site, excavated in 1913 (by Spitsyn, 1914, p.106, fig.40).

Fig.55. Iron locks (1-8, 11-12) and their springs (9-10, 13).
1-4, 10-13 - NMRT N 5365-19, inventory NN 1777, 1779, 1778, 1782, 1775, 1776 and without inventory N (10); N 5365-19 (13), inventory N 1780, old N 12811.
5-8 - SOMK NN 1223, 1247, NVSP 17337/7 (AO 159).
9 - Archaeological club-museum at the Saratov regional station of young tourists.

Fig.56. Halves of bronze locks.
1-3, 9-10 - SOMK NN AO 1244/1-3, NVSP 29779 (AO 288/4), 1245/4.
4-8 - NMRT N 5365-9.

Fig.57. Springs from bronze locks (1-3), keys (4-8), large figured brackets (9-11), a plate (12) and a stirrup-like object (13).
1-5, 9-13 - bronze, 6-8 - iron.
1-3, 6, 9, 11 - SOMK NN NVSP 28696 (AO 262/7), 1229, 1220/4, NVSP 29782 (AO 288), 1309/4, NVSP 29775 (SUAK 1014; AO 261).
4-5, 8, 10, 12-13 - NMRT NN 5365-69, 5365-64 (old N 12438 and without NN), 5365-8 (inventory N 1783), 5365-32.
7 - Archaeological club-museum at the Saratov regional station of young tourists.

Fig.58. Small metal wares.
1-7, 9-14, 16-29 - bronze, 8 - silver, 15 - iron.
1-2, 7-9, 12-19, 22-23, 25, 29 - SOMK NN NVSP 29778 (SUAK 1014/27; AO 261); SMK 52039/A-2325 (AO 264/7); NVSP 27839 (SUAK 3907); 1251; 1227; NVSP 29776 (SUAK 1014; AO 262); NVSP 28303 (AO 266/2); NVSP 29773 (AO 168); NVSP 28705 (AO 263/1); 1222/2; 1043/5; 1289; 1223; NVSP 29783 (AO 300); NVSP 29774 (SUAK 1014/25; AO 261); investigations of 1997.
3-4, 10-11, 20-21, 26-27 - NMRT NN 5365-64, 5365-?, 5365-34, 5365-33, 5365-72.
5-6, 24 - the archaeological club-museum at the Saratov regional station of young tourists.
28 - GIM N 34162, inventory 952, N 19.

Fig.59. Knife couplings (1-31), facings of knife handles (32-33) and knifes (34-44).
1 - bronze and a lead, 2-33 - bronze, 34-35 - iron and bronze, 36-44 - iron.
1-25, 27, 28-32, 34-38 - SOMK NN 1220, 1223, 1227, 1252/2, 1257, investigations of 1998; NVSP 28638 (SUAK 1024; AO 262/8); 1309/3; NVSP 28711 (AO 263/11); NVSP 28702 (SUAK 1045; AO 262/3); 1040; NVSP 29908 (AO 316/7); NVSP 31007/1-2 (SUAK 1436).
26, 34, 39-41, 44 - the archaeological club - museum at the Saratov regional station of young tourists.
33 - GIM N 34162, inventory 952, N 42.
42-43 - NMRT N 5365-25, old N 7795, OAIII-23 (?); 5365-95, inventory N 1796, old N 12883.

Fig.60. A plates (1-4), knifes (5, 8), rings (6-7), small anvils (9-10), filling of pouring grate (11), a chisel (12) and a jeweller's hammers (13-14).
1-4 - gold, 5-6, 8, 12-14 - iron, 7, 9-11 - bronze.
1-4, 11 - SOMK NN SMK 48393 (AO 327), D2-8; SMK 48394 (AO 331), D2-9; NVSP 30989 (SUAK 86).

5-7, 9-10 - GIM N 34162, inventory 952, NN 51-53, 21, 20.
8 - an archaeological club-museum at the Saratov regional station of young tourists, N 23.
12-14 - NMRT NN 5365-14, inventory N 1797, old N 1298, OAIII-11; 5365-23, inventory N 1767, old N 18823; 5365-23, inventory N 1788, old N 12209, OAIII.

Fig.61. Bronze (1) and stone (2-6) casting moulds.
1, 4 - GE NN ZO-2, 7273,30; ZO-357, 7273.32.
2-3, 5-6 - SOMK NN AO 696, 968, 277, 996.

Fig.62. Stone casting moulds.
1 - NMRT N 5365-58.
2-3, 6 - GIM N 34162, inventory 952, NN 11, 10, 12.
4-5 - SOMK NN AO 970, 967 (SUAK 687).

Fig.63. Stone casting moulds. GIM N 34162, inventory 952, NN 10-12.

Fig.64. Stone casting mould. GIM N 34162, inventory 952, N 12.

Fig.65. Iron fishing hooks (1-13) and a boat cramp (14).
1 - settlement of Podgornoe, 2-14 - Uvek site.
1 – EKM N 7737.
2-3 - NMRT N 5365-70, old N 12723.
4-14 - SOMK NN SMK 53339/A-2422 (AO 309), AO 309, NVSP 29904 (AO 316/5).

Fig.66. Ceramic (1-13, 16) and stone (14-15) fishing loads.
1-14, 16 - Uvek site, 15 - Hmelevskoe I settlement.
1-3, 5-13, 15 – SOMK NN NVSP 18121 (SUAK 170), AO 307, SMK 38575/A-68 (AO 305), 53337/A-2420 (AO 304), 53338/A-2421 (AO 308), NVSP 31471 (SUAK 2042/5, AO 910), AO 303, SMK 53336/A-2419 (AO 302), investigations of 1998.
4, 14 - NMRT NN old N 12807; 5365-34.
16 - GE N ZO-186, 7273,28, 7273,40.

Fig.67. Unglazed pottery: jar-like (1-4) and flask-like (5) vessels, storage jar (6).
1-6 - SOMK NN SMK 51657-51658 (AO 222, 230), 52053/A-2336 (AO 226), 51652 (AO 209), 51654 (AO 211), AO 1505.

Fig.68. Unglazed two-handle jar. GIM N 26340, inventory 1507, N 1.

Fig.69. Unglazed two-handle jar (photo). GIM N 26340, inventory 1507, N 1.

Fig.70. Unglazed storage jar with handles. NMRT N 5365-55, OAIII.

Fig.71. Unglazed pottery: lids (1-4), a jar-like vessel (5), clay lamps (6-9).
1-3, 7 - NMRT N 5365-38, old NN 12770-12770a, 12770e, OAIII-78, N 5365-39, old N 12777, OAIII-80.
4-5, 9 - SOMK NN SMK 51655 (SUAK 2030, AO 216), 51653 (OA 210).
6, 8 - the material is given by M.I.Kurakin.

Fig.72. Unglazed lids. NMRT N 5365-38, old NN 12770-12770a, 12770e, OAIII-78.

Fig.73. Unglazed pottery: sphere-cone vessels (1-8) and tiny vessels (9-10).
1-6, 8-9 - SOMK NN SMK 51982/A-2268 (SUAK 526, AO 254), 51966-51968 / A - 2258-2260 (AO 241, 245, 962), 51974/A-2266 (AO 247), 51971 (SUAK 126, AO 248), 52049/A-2332 (AO 2070), NVSP 29923 (SUAK 971/12).
7 - the material is given by M.I.Kurakin.
10 - NMRT N 5365-50, old N 18511.

Fig.74. Unglazed tiny vessel and small glazed jar. NMRT NN 5365-50, old N 18511; 5365-44, old N 12771, OAIII-69.

Fig.75. Glazed (1) and unglazed (2-7) pottery: tuvaks (1-3), money-boxes (4-5), handle of amphora (6), pot of the Mordvin shape (7).
1-2, 4 - SOMK NN SMK 52051-52052/A-2334-2335 (SUAK 170, AO 236), 52047/A-2330 (AO 233).
3, 5-6 - NMRT NN 5365-50, old N 12774; 5365-40, old N 19769, OAIII-73; 5365-34, OAIII-85.
7 – EKM, rescue excavations of 1994.

Fig.76. Unglazed tuvak. NMRT N 5365-50, old N 12774.

Fig.77. Unglazed clack with eight apertures (1) and money-box (2).
1 - GE N ZO-376, 157-13, reg. N 58725, N 12.
2 - NMRT N 5365-41, old N 12769, OAIII-73, N 25.

Fig.78. Unglazed flagon. SOMK N AO 235.

Fig.79. Unglazed flagon (sideways view). SOMK N AO 235.

Fig.80. Unglazed grey-clay stamped flagon. SOMK N SMK 57925.

Fig.81. Kashi (1, 7-8, 10) and red clay (2-6, 9) glazed pottery.
1, 7-10 - SOMK NN NVSP 29770 (AO 225), AO 951, 217, 221, 1544.
2-5 - NMRT NN 5365-45, old N 14981, OAIII-68, 5365-44, old N 12771, OAIII-69, 5365-47, old N 13097, OAIII-67, 5365-56, OAIII-81e.
6 - the material is given by M.I.Kurakin.

Fig.82. A. The scheme of a situation of the Uvek site and monuments of its periphery, on which Old Russian materials were found.
Monuments designated on the scheme: 1 - Uvek urban site, 4 - Chardymskoe II hillfort and settlement, 9 - settlement at village Pristannoe, 11 - settlement at village Kurdium, 15 - Alekseevskoe hillfort, 18 - Rokotovskoe settlement, 19 - Boldyrevskoe settlement, 27 - Bagaevskoe settlement, 29 - Hmelevskoe I settlement, 30 - settlement at village Shiroky Buerak, 33 - Ahmatskoe settlement (in site 'Martyshkino'), 34-35 - settlements Kondakovo I and II, 44 - settlement at village Podgornoe, 50 - settlement at farm Shalovo, 52 - settlement in site 'Podstepnoe', 60 - Aleksandrovskoe site, 118 – barrow at Engels town.
B. Unpublished Old Russian materials founded on Uvek urban site (1-7,9-15,17-23,25-28) and settlements at villages Podgornoe (8), Shumeyka (16,24), Kurdium (29): fragments of amber (1-2) and glass (6-7) rings, glass bracelets (5, 8-15), amber pendants (3-4), bronze ring (16), eyelet from enkolpion (17), a fragment of a small icon (18), parts of cast chains (19-20), details of khoroses (21-22), a censer (23), a stone cross (24) and casting mould (25), rims of pottery (26-29).
1, 3-6, 9-10, 12, 16-22, 25, 27-29 - SOMK NN 1228, SMK 52036/A-2322 (AO 208; SUAK 3601), NVSP 27835 (SUAK 2388), 18068, 27836 (SUAK 2388), 34914, SMK 47835 (AO 862/3), 1223, 1222/6, 1226/5, 1222/3, AO 275, NVSP 31423/1-2 (AO 906/1), 1027.
2, 7, 11, 13-15, 23, 26 - NMRT NN 5365-?, 5365-58, without inventory N, 5365-32, 5365-63 (OAIII-3).

8, 24 - EKM NN 9784, 7441.

Fig.83. Old Russian pottery from Ukek and its periphery: Uvek (1-7,13-14,16-17,24-30) and Alekseevskoe (8-9,12,20-21) urban sites, settlements Pristannoe (18), Boldyrevskoe (23), Bagaevskoe (31-37), Hmelevskoe I (11,15,19,22,38-40) and Shiroky Buerak (41-42), Aleksandrovskoe site (10).
1-23,31-42 - SOMK NN NVSP 34926-34932, 29089, 31424/1-2 (AO 906/1), 744 (AO 996), NVSP 31423/3 (AO 906/1), 29091, materials of investigations of 1995-1996.
24-30 - Archaeological club-museum at the Saratov regional station of young tourists.

Fig.84. The scheme of a situation of monuments of Ukek regions.
Settlements: 1 - Uvek urban site, 2 - Chernyshevka-1, 3 - Usovka, 4 - Chardymskoe II hillfort and settlement, 5 - Chardymskoe I hillfort, 6 - Chardymskoe IV hillfort, 7 - Farm Mohovoy, 8 – Ust'-Kurdium site, 9 - Pristannoe, 10 – Oktyabrsky Gorodok, 11 - Kurdium, 12 - Polivanovka, 13 - summer residence of Korol'kova, 14 – settlement Severnyy ('Pesochnoe'), 15 - Alekseevskoe hillfort, 16 - Sokolovaya mountain, 17 – Lermontova Street, 18 - Rokotovka, 19 - Boldyrevka, 20 - Uvek I settlement, 21 - Uvek II settlement, 22 - Uvek III settlement, 23 - Vislovka II, 24 – Bol'shaya Dmitrievka, 25 - Konstantinovka, 26 – Kolotov Buerak, 27 - Bagaevka, 28 - Hmelevskoe II, 29 - Hmelevskoe I, 30 – Shiroky Buerak, 31 – 'Elansky Ruchey', 32 - Ahmatskoe hillfort, 33 - Martyshkino, 34 - Kondakovo I, 35 - Kondakovo II, 36 - Kondakovo III, 37 - Kondakovo I, 38 - Skatovka, 39 - Chapaevo (Freyzengeym), 40 – Zaumor'e, 41 – Uzmor'e, 42 - Ternovka I, 43 - Ternovka II, 44 - Podgornoe, 45 - Kvasnikovka, 46 - Anisovka, 47 - mouth of Saratovka river, 48 - 'Ivan', 49 – Uchhoz I, 50 – Praporsky Bugor, 51 - 'Plotina', 52 - Shumeyka ('Podstepnoe'), 53 - Sovetskoe ('Zimnik').
Sites: 54 - Hlebnovka, 55 - 'Belaya Voda', 56 - Kuvyka, 57 - Estontsy, 58 – Chernyshevskogo Street, 59 - Yurish, 60 - Aleksandrovskoe, 61 – Burkin Buerak, 62 – Sel'hoztehnika I, 63 - Sel'hoztehnika II, 64 - Sel'hoztehnika IV, 65 – Kolotov Buerak, 66 - Petropavlovka, 67 - Karamysh station, 68 - Pudovkino, 69 - Sosnovka-3, 70 - Ahmatskoe I, 71 - Ahmatskoe II, 72 – Uzmor'e, 73 - Shumeyka, 74 - Pribrezhnyy I, 75 - Pribrezhnyy II, 76 - 'Mys'.
Burial grounds: 77 - Chardymsky, 78 - burial on Tanavskoe site, 79 - Pristannoe, 80 - 'Kombayn', 81 - Alekseevsky, 82 - Boldyrevsky, 83 - Uleshi, 84 - Uvek II, 85 - Uvek I, 86 - Hmelevsky II, 87 - Hmelevsky III, 88 - Hmelevsky I, 89 – Shiroky Buerak, 90 - Ahmat ('Martyshkino'), 91 – Nizhnyaya Studenka-I, 92 - Ternovka, 93 - Podgornoe, 94 - Shumeyka ('Podstepnoe').
Barrows and barrow groups: 95 - Raslovka, 96 – Novaya Lipovka, 97 – Ust'-Kurdium II, 98 – Ust'-Kurdium I, 99 – Dolgy Buerak, 100 - Vishnevoe, 101 - Astrakhan tract, 102 - Dvoenka II, 103 - Dvoenka I, 104 – Bol'shaya Dmitrievka I, 105 - Bol'shaya Dmitrievka II, 106 - Rybushka II, 107 - Rybushka I, 108 - Rybushka III, 109 - Panitskoe, 110 - Sosnovka, 111 - Skatovka II, 112 - Skatovka I, 113 – Zaumor'e, 114 - Berezovka, 115 – Uzmor'e, 116 - Podgornoe, 117 - Kvasnikovka, 118 - Engels, 119 - Pokrovsk, 120 – Suhaya Saratovka, 121 - Sovetskoe (Mariental') II, 122 - Sovetskoe III, 123 - Sovetskoe (Mariental') I, 124 - Susly, 125 - Krutoyarovka.
Hoards of coins: 126 - Polchaninovka, 127 - Saratov of 1900, 128 - Saratov of 1847, 129 - Boldyrevka, 130-140 - Uvek I-XI, of 1864, 1860s, 1879, 1889, 1891a, 1891b, 1893, 1904, 1911-1912, 1912, 1994, 141 - Rybushka, 142 - Mordovo I, 143 - Mordovo II, 144 - Ahmat, 145 - Tarlykovka, 146 - Podstepnoe.
Separate finds of coins: 147 - Chardym, 148 – Naberezhnaya Kosmonavtov, 149 – Esipovka, 150 - Knyazevka, 151 – farm Studensky, 152 – Privol'noe, 153 - Voskresenka, 154 - Berezovka, 155 – Uzmor'e, 156 – Pokrovskaya Buhta, 157 - Pokrovskaya suburb, 158 – river Saratovka, 159 - Osinovka.

Fig.85. Legend to the schemes of Ukek regions (fig.84, 90-92).

Fig.86. Fragments of Trebizond amphorae from objects on Hmelevskoe I settlement, trench I, 2000, pit 4 (1) and 1999, pits 3 (2), 1 (3-4).

Fig.87. Unglazed jars (1-2) and tuvak (3) from trench I (1999) on Hmelevskoe I settlement, pit 4.

Fig.88. Fragment of Trebizond amphora from trench I (2001) on Shiroky Buerak settlement, pit 1.

Fig.89. Bronze icon from Kondakovo II settlement. EKM N 12664.

Fig.90. The monuments of Ukek regions, on which were found coins of 1266-1312 (the numbering of monuments on a fig.90-92 corresponds to numbering in the text of chapter III and in a fig.84).

Fig.91. The monuments of Ukek regions, on which were found coins of 1312-1365.

Fig.92. The monuments of Ukek regions, on which were found coins of 1365-1395.

Appendices

APPENDIX 1.

Jochid coins found on the Uvek site of ancient city[1]

Silver: Mengu-Timur: Bulgar 673 A.H.-2; Saray 677 A.H.-1; city? 677 A.H.-1; Mengu-Timur(?): city? year?-1; Tuda-Mengu: Saray 681 A.H.-2, 682 A.H.-1, year?-3; city? year?-1; anonymous: Saray 681 A.H.-2, 681(?) A.H.-1, 689 A.H.-1; an-Nasir lid-Din Allah (Tokta?): Saray(?) without date-3; Tokta: Saray 691 A.H.-2(1 re-coined), 695(690?) A.H.-1, 696 A.H.-1, without date (before 710 A.H.)-4; Ukek 706 A.H.-1, 707 A.H.-1, 711 A.H.-1, without date (type of 707 A.H.)-1, without date-4; Saray al-Makhrusa 710 A.H.-7; Madzhar 710 A.H.-1; city? 710 A.H.-1, year?-1; Uzbek: Mokhsha 713 A.H.-1, 714 A.H.-1, 717 A.H.-1, 718 A.H.-2, year?-1; Saray al-Makhrusa 722 A.H.-6, year?-1; Saray 717 A.H.-1, 722 A.H.-1, 727 A.H.-2, 731 A.H.-1, 734 A.H.-4, 734(?) A.H.-1, 739 A.H.-1, year?-4; Saray(?) 716 A.H.-1; Bulgar al-Makhrusa 723 A.H.-1, 732 A.H.-1; Bulgar 733 A.H.-1; Khorezm 722 A.H.-1; city? 713 A.H.-1, 716 A.H.-1, 727 A.H.-1, 732 A.H.-1; Uzbek(?): city? year?-1; Janibek: Saray al-Djedid 742 A.H.-1, 743 A.H.-3, 744 A.H.-2, 745 A.H.-4, 746 A.H.-6, 746(?) A.H.-1, 747 A.H.-5, 748 A.H.-1, 748(?) A.H.-1, 749 A.H.-1, 750 A.H.-1, 751 A.H.-1, 755 A.H.-1, 75? A.H.-1, year?-1; Gulistan 752 A.H.- 2, 753 A.H.-4, 754 A.H.-1, 75? A.H.-1; Tebriz 751(?) A.H.-1; Birdibek: Saray al-Djedid 759 A.H.-1, year?-1; Gulistan 758 A.H.-1, 759 A.H.-2, 760 A.H. -1; Azak 759 A.H.-2, 760 A.H.-1; Kulna: Azak 760 A.H.-1; city? year?-1; Nauruz: Gulistan 761 A.H.-2, year?-1; khan?: city? 761 A.H.-1; Ordu-Melik: city? year?-1; Kildibek: Azak 763 A.H.-1; city? year?-1; Murid: Gulistan 763 A.H.-1, 764 A.H.-1; Aziz-Sheykh: Gulistan al-Makhrusa 767 A.H.-1, year?-2; Kaganbek: Saray al-Djedid 777 A.H.-1; khan?: city? year? (with over-strike “khan”)-1; Toktamysh: Saray al-Djedid 786 A.H.-1; Khorezm 788 A.H.-1; city? 785 A.H.-1; Toktamysh(?): city? year?-1.

Copper: Mengu kaan: Bulgar without date-2; anonymous (last third of the XIIIth century): Bulgar without date-1; Krym year?-1; Uzbek: Saray al-Makhrusa 715 A.H.-1, 731 A.H.-1; Mokhsha 715(?) A.H.-1, 717 A.H.-2; 720?(72.) A.H.-1, 740(741?) A.H.-1, without date(?)-2(1-Uzbek?); Saray 721 A.H.-5, 721(?) A.H.-1, 726 A.H.-11, 731 A.H.-35, 734 A.H.-1, 737 A.H.-12, without date-34; Saray(?) year?-5; Krym 71? A.H.-1; Azak 734 A.H.-3; Bulgar 734 A.H.-4; city? 734 A.H.-1, without date-23; Janibek: Saray al-Djedid 743 A.H.-3, without date(with a double-headed eagle)-110, 751 A.H.-2, 751(?) A.H.-1, 752 A.H.-63, 753 A.H.-129, 755(?) A.H.-1, 756 A.H.-1, 75? A.H.-8; year? (with a flower)-60, year?(image?)-20; Gulistan year?(with a double-headed eagle)-13(2-?); Krym 744 A.H.-1; Mokhsha 744 A.H.-1, 745 A.H.-1, 756 A.H.- 2, without date-4; Khorezm 749 A.H.-2, 754 A.H.-2, 757 A.H.-1; Bardzhin 753 A.H.-12; city? year?-21(including 18 - with a double-headed eagle); Khizr: Saray al-Djedid 762 A.H.-29, 76? A.H. -2; Gulistan 762 A.H.-65(1- with an over-mint), 76? A.H.-1, year?-3; city? year?-3; Murid: city? year?-2; Kildibek: Saray al-Djedid 763 A.H.-3; Azak 763 A.H.-1; Mir-Bulat: Saray al-Djedid 764 A.H.-1, year?-1; Aziz-Sheykh: Saray al-Djedid 767 A.H.-1; city? year?-2(with an over-strike); Abdullah: city? year?-5(2 - with an over-strike “Abdullah”); Abdullah(?): city? year?-1; anonymous coins of the internecine wars period: Saray al-Djedid 760 A.H.-12, 761 A.H.-4, 762 A.H.-3, 762(?) A.H.-1, 768 A.H.-1; Gulistan 762 A.H.-16, 764 A.H.-36(13 - with an over-strike, 8-764(?) A.H.), 765 A.H.-1, 766 A.H.-6, year?-27; Mokhsha 777 A.H.-1; khan?: city? year? (with an over-strike “khan”) - 1; Toktamysh: Saray al-Djedid 787(?) A.H.-1; city? year?-1.

Metal?: Mengu-Timur: Bulgar 673 A.H.-1; city? year?-2; Tuda-Mengu: city? year?-1; Tokta: Ukek 706 A.H.-6; city? 691 A.H.-1, year?-6; Uzbek: Saray al-Makhrusa 712 A.H.-1, 732 A.H.- 1; Saray 730 A.H.-2, 737 A.H.-11, Azak year?-1; city? 726 A.H. -1, 730 A.H.-3, 740 A.H.-1, 741 A.H.-1, year?-20; Janibek: Saray al-Djedid 744 A.H.-1, 746 A.H.-1, 747 A.H.-1, 748 A.H.-1, 749 A.H.-1, 752 A.H.-12, 752 or 753 A.H.-66, 753 A.H.-4, year?-69; Gulistan 753 A.H.-2, 756 A.H.-2, without date-2; Bardzhin 753 A.H.- 7; Saray year?-6; city? year?-33; Birdibek: Saray al-Djedid 758 A.H.-1; Gulistan 760 A.H.-1; Azak year?-2; Kulna: Gulistan 760 A.H.-1, 761 A.H.-2; Nauruz: Gulistan 761 A.H.-1; Khizr: Saray al-Djedid 762 A.H.-47, without date-1; Gulistan 761 A.H.-1, 762 A.H.- 85, year?-13; city? year?-4; anonymous(?): Gulistan 763 A.H.-1, 764 A.H.-15; Murid: Gulistan 762 A.H.-1, 763 A.H.-2; Kildibek: Azak 763 A.H.-3; city? year?-2; Aziz-Sheykh: Gulistan 769 A.H.-1; city? year?-4; Abdullah: city? year?-1; with an over-strike: city? 767 A.H.-2, year?-3; Muhammed-Bulyak: city? year?-2; Toktamysh: Saray al-Makhrusa year?-1; city? year?-3(1-?); khan?: Bardzhin year? - 2.

[1] During the composition of this list only the most trust-worthy data were used.

Resources (to Appendix I): Ballod, 1923-1, p.72-73; Vasil'chikov, p.28-29; Medoks, 1893, p.53-54; *Protokol III-go obshchego sobraniya gg. chlenov OAIE 4 sentyabrya 1878 goda*, p.50-51; Sablukov, 1884, p.307; Savel'ev, 1880, p.171-175; Savel'ev, 1858, p.272-274, 276, 278-281, 283; *Sluchaynye nakhodki i priobreteniya. Saratovskaya guberniya*, p.135, 161; Fasmer, 1926, p.296; Fyodorov-Davydov, 1963, p.195; Yazykov, p.118-119; GASO, fund 407, inventory 2, file 117, p.57; GASO, fund 407, inventory 2, file 652a, p.142-158; KZVM, Vol.I, NN 35, 334-336, 519, 988, 1106, 1529; KZVM, Vol.II, N 3089; Neizdannoe sochinenie prof. G.S.Sablukova, p.20-23; Sablukov G.S. Zametki o vostochnoy numizmatike / Kollektsiya zolotoordynskikh monet, sobrannykh na gorodishche Uvekskom v 1847 g., p.13-16; Catalogue of the Golden Horde copper coins of Saratov regional museum of regional ethnography; Collection of Engels museum of regional ethnography; Collection of E.N.Borisenkov and data by Yu.A.Safronov (Saratov).

APPENDIX 2.

Jochid coins found on the monuments of Ukek regions[2]

Silver: Arig-Buga: Bulgar without date-1; Mengu-Timur: city? 672 A.H.-1, 680 A.H.-1; Tuda-Mengu: Saray 682(?) A.H.-1; city? 681 A.H.-1; anonymous: Ukek year?-2; an-Nasir lid-Din Allah (Tokta?): city? year?-1; Tokta: Saray without date-1; Ukek year?-2; Saray al-Makhrusa 710 A.H.-2; city? year? (before 710 A.H.?)-1; Uzbek: Saray 717 A.H.-1, 722 A.H.-2, 734 A.H.-2, 734(?) A.H.-1; Saray al-Makhrusa 71? A.H.-1; Mokhsha 721 A.H.-1, 726 A.H.-1; Bulgar al-Makhrusa 732 A.H.-1; city? 724 A.H.-1; Janibek: Saray al-Djedid 743 A.H.-1, 745 A.H.-2, 746 A.H.-2, 748 A.H.-1, 750 A.H.-1, 753 A.H.-1, year?-4; Saray al-Makhrusa 749 A.H.-1; city? 747 A.H.-1, 756 A.H.-1; Birdibek: Azak 759 A.H.-4, 760 A.H.-1; Kulna: Gulistan 760 A.H.-1; Khizr: Saray al-Djedid year?-1; Azak 762 A.H.-1; Abdullah: Azak 765 A.H.-6; khan?: Saray al-Djedid year?-1; city? 774 A.H.-1.

Copper: anonymous (1266-1312): Ukek without date-2; Uzbek: Saray 721 A.H.-2, 721(?) A.H.-2, 726 A.H.-14, 726(?) A.H.-13, 731 A.H.-14, 737 A.H.-35, without date(with a lion and sun)-27; Saray (?) 1330-s (with a lion and sun)-1; Saray al-Makhrusa 731 A.H.-2; Mokhsha 726 A.H.-1; Krym year?-1; Bulgar 737 A.H.-1; city? 721 A.H.-1, 730(731?) A.H.-1, 731 A.H.-2, year?-1; Uzbek (?): Saray (with a lion and sun?) year?-8; Janibek: Saray al-Djedid without date(with a double-headed eagle)-58, 750 A.H.-1, 752 A.H.-12, 753 A.H.-1, without date(with a flower)-46, year?-1; Saray al-Djedid(?) 75? A.H.-1; Krym 744 A.H.-2; Khorezm 749 A.H.-2, 754 A.H.-1, year?-2; Bardzhin 753 A.H.-3, 754 A.H.-1; Bardzhin (?) 753 A.H.-1; Mokhsha 743 A.H.-1, 756 A.H.-1; Khizr: Saray al-Djedid 762 A.H.-17, 76? A.H.-1; Gulistan 762 A.H.-20, 76? A.H.-2; Timur-Khoja: city? 762 A.H.-2; anonymous coins of the internecine wars period: Gulistan 764 A.H.-9, 766 A.H.-3; Cherkes: Haji-Tarkhan 776 A.H.-1; Toktamysh: Saray 787 A.H.-2, year?-1; Saray al-Djedid without date-1; Khorezm 790 A.H.-2; Orda 785 A.H.-1; city? 786 A.H.-1; khan?: Orda year?-1; city? 762 A.H.-1.

[2] Together with the Uvek site of ancient city, the materials of the Uvek I burial ground situated on its territory, are not listed here.

APPENDIX 3.

O.V. ORFINSKAYA, O.B. LANTRATOVA, V.P. GOLIKOV, A.D. ALIEV

The Complex Experimental Research of Samples of the Golden Horde Textile of the XIIIth - XIVth centuries from the Uvek site of ancient city

Introduction

Textile from the Golden Horde burials of the XIIIth – XIVth centuries of the Uvek site of ancient city (Saratov region) was investigated in the Centre of Historical and Traditional Technologies of the Russian Research Institute of the Cultural and Natural Heritage. The samples are at present kept in the Saratov Museum.

The samples are delivered to the Centre by the Chief curator of Archaeological Museum of Kazan State University.

1. The Research Objectives

The research aimed to reach the following objectives.

1. To reveal the set of materials and technological modes of textile production.
2. To estimate the technology of metallized threads production.

2. The Research Objects and Methods

Two samples of textile articles from the Golden Horde burials of the XIIIth – XIVth centuries of the Uvek site of ancient city were investigated:

1. ***Polychrome silk brocade shroud cloth*** (AO 1712). This cloth is an accidental find on the Uvek site of ancient city at the end of 1930-s – beginning of the 1940-s.
2. ***Dichromatic silk tape*** (A-2377, AO 159). This tape was found by F.V.Ballod during the excavations of a burial place on the Uvek site of ancient city in 1919.

In the given samples of textile the following materials and technological modes were investigated:

- The nature of textile fibres in threads.
- The technology of producing threads of textile fibres.
- The type of an article (cloth, tape).
- The set of colours and the technology of dyeing.
- The set and extent of damages of silk fibres in threads.
- The nature of metal in gold threads.
- The type of base under the film of metal in gold threads.

For the analyses of the technology of thread production the following characteristics were estimated:

- *Thickness of threads.*
- *Presence and type of twist.*
- *Nature of fibres.*

Besides, the graphic reconstruction of textile weave in the samples of cloth and tape with the accordance with international standards was made (Fig.3, 14).

For the analyses of the above mentioned technological peculiarities of the Golden Horde textile the following experimental methods were used:

- *Micro-probe analyses of the qualitative and quantitative element composition of micro-samples;*
- *Microscopy in reflected non-polarized light (MBS-10, magnification 10-100 x);*
- *microscopy in reflected polarized light ('Polam P-312', magnification 200 x);*
- *microscopy in permeating polarized light ('Polam P-211', magnification 400-600 x);*
- *micro-chemistry;*
- *histo-chemistry;*
- *thermal analysis.*

During the analyses of gold threads by the micro-probe method the element composition was investigated on the thread surface by two main methods:

- The half-quantitative distribution of several elements on a vast enough surface of threads, which allows to estimate the presence of various elements in one section of the surface (Fig.9, 9a).
- The precise quantitative composition of elements on a limited section of thread surface (Fig.10a-10c). In this paper the sections with smaller (Fig.10a, 10b) and larger (Fig.10c) surface were investigated.

For the microscopy in permeating polarized light the constant ***immersion preparations of textile and concomitant materials*** in firs balm were made (Fig. 4-6, 11, 15, 16).

For some micro-samples of gold threads ***microscopic sections*** in firs balm were made (Fig. 11)**.**

For photo fixation of the results macro- and micro- photos were taken.

3. The results of the investigation of materials and technological modes in textile

The research results are presented in Fig. 2-11, 13-17 and Tab.1-3, and are described in detail below.

3.1. The nature of textile fibres

In both the cloth and the tape the natural silk of various thickness was used as the fibre raw material.

1. ***In the threads of the cloth*** thin filaments (microfibres) of silk prevailed.
2. ***In the threads of the tape*** thin as well as thicker silk filaments could be seen.
3. Thin silk ***filaments*** were used in yellow threads of warp.
4. Thicker silk ***filaments*** were used in brown threads of warp and weft.

The effect of the increase of thickness of brown filaments can be connected with two different reasons:

- The use of thicker silk filaments in brown threads.
- Increase of the thickness of silk filaments during their dyeing with tanid colours on iron mordant.

At present it is impossible to find out which of the two reasons is more correct.

3.2. The technology of producing threads out of textile fibres

The information on the technology of thread production in the studied samples is summarised in Table 1.

Cloth (Sample N°1)

Warp threads have loose Z-twist with the pitch of 1.5 mm.

The threads of the silk weft are not spun (I -twist).

Tape (Sample N°2)

Warp threads have loose Z-twist with the pitch of 2.0 mm.

The threads of the silk weft are not spun (I -twist).

3.3. The structure of textile weave

Among the studied samples there were found two types of ***primary textile articles*** – **a *cloth*** (Sample 1) and ***a tape*** produced on a loom (Sample 2).

The structures of weave in these samples of textile are presented in Fig. 3, 14, summarised in Tab.1, and are described in detail in Section 4.

3.4. The research of colours and technology of dyeing

3.4.1.The set of threads of various colours

In cloth (Sample N°1) threads of the following colours (Fig.1, 3) can be seen visually:

- Green (or blue) threads of binding warp and background weft.
- Yellow threads of consolidating warp and ornament-making weft.

In tape (Sample N° 2) the visual estimation showed threads of the following colours (Fig.12, 13):

- Yellow threads of binding warp.
- Brown threads of inner warp and weft.

3.4.2.The composition of colours and technology of dyeing

The estimation of the presence of original colouring in coloured threads ad the identification of the colours is difficult due to the specific features of archaeological textile connected with its prolonged stay in the ground:

- *The coloured ground organic substances can be bound with fibres like the original colours. This factor can to an especially large extent distort the results of the investigation if the original colours had been yellow or brown as the majority of coloured substances in the ground are of these colours.*
- *Original colours can be destructed or washed out of the fibres under the influence of aggressive ground solutions.*
- *On the surface of fibres various non-soluble ground substance, including coloured ground substances, can fall out, which makes the definition according to the usual methods difficult.*

That is why the investigation of colours composition and technology of dyeing of the given archaeological samples was carried out in two stages.

In the first stage the colour characteristics of filaments (individual microfibres) were studied by microscopic methods in immersion preparations. Besides, the colour characteristics of the investigated fibres can be estimated in microphotographs (Fig.4, 5, 6, 15, 16).

In the second stage the colour characteristics of the filaments were compared with the colour characteristics of pollutions, which are present in the same immersion preparations.

The investigated fibres were divided into two main groups:

- Fibres, the colour characteristics of which are comparable with pollutions. ***All yellow fibres of various tints*** belong to this group.
- Fibres, the colour characteristics of which are different from the colour characteristics of pollutions. To this group we attributed the ***blue (or green)*** fibres in the cloth of Sample N° 1, and the ***brown*** fibres in the tape of Sample N° 2.

In the filaments of the first group the main part of the colouring is determined not by the original colours, but is practically absolutely determined by the coloured ground substances. In order to check this point of view, for the yellow threads of the tape the extract of yellow coloured substances was prepared and the spectre of their absorption was registered (see Fig.17). The analysis of the spectre of this yellow substance and its alkaline derivatives showed that the substance is not the original yellow colour, but belongs to the yellow ground substances. That is why the yellow coloured substances in the rest of the threads were not studied in detail.

Table 1. Technological characteristics of textile articles from Uvek

Sample of textile	The structure of textile weave	Fibre type	Type of threads in textile*	Characteristics of threads				Characteristics of cloths	
				Twist			***Thickness, mm***	***Distance between the threads, mm***	***Density*** *(number of Threads per 1 cm)*
				sequence	*type*	*pitch, mm*			
Cloth (Sample 1)	Weave of warp and weft threads, consisting of the combination of linen and serge weave	silk	1	II	S	2.00	0.20 - 0.30	0.00	40
				I	Z	1.40	0.10 - 0.15		
			2	I	Z	1.40	0.10 - 0.15	0.40	20
			3	I	-	-	0.30 - 0.40	0.20	16
			4	I	-	-	0.30 - 0.40	0.20	16
		gold	5	-	-	-	0.40 - 0.45	0.15	16
Tape (Sample 2)	Weave of warp and weft threads with the interwoven warp threads	silk	6	I	Z	н	0.25 - 0.30	0.00 & 1.70**	5
			7	I	Z	2.00	0.30 - 0.35	0.00& 0.60	25
			8	I	I	-	0.75	0.00	13

Conventional Signs:
(-) – parameters are absent
(H) – parameter can not be defined due to the small size or bad condition of the textile fragment.
* Types of threads

Sample 1, Cloth (AO 1712).
1 – Thread of the binding warp
2 – Thread of the consolidating warp
3 – Thread of the background warp
4 – Thread of the silk ornament weft
5 – Flat gold thread of the ornament weft

Sample 2, Tape (AO 159).
6 – Thread of the inner warp
7– Thread of the binding warp
8 – Thread of the weft

** – distance between the threads in groups and distance between the groups

For the fibres of the second group, where the colouring was not connected with the ground pollutions, the additional spectre-photometric investigations of the fibre extracts were carried out.

The results of the investigations of the colours in extracts are presented in Fig.7, 17.

Below the results of the investigation of the colours and the technology of dyeing of the coloured fibres from the second group are given.

Blue or green fibres in various threads of cloth (Sample N°1)

It should be noted that in the archaeological textile the merely visual estimation does not allow to determine the original colouring as blue or green. This is explained by the presence of uncontrollable quantity of yellow ground substances (see above). Thus, it is impossible to confirm the presence of the blue or green original colouring of threads, if the presence or absence of yellow original colours is not proved.

In all threads of this colour in sample N° 1 (see 3.4.1.) the blue boiler natural colouring ***Indigo*** (Fig. 7) was found. The source of ***Indigo*** is usually ***indigo plant*** (Indigofera tinctoria) or vaida (Isatis tinctoria) [1-4]. Indigo plant grows in the South or South-East Asia, and vaida – in Europe and Central Asia [1-4]. So the dyeing could be on the basis of the local as well as imported sources of ***Indigo***.

In the investigated cloth the analysis of the technology of dyeing with ***Indigo*** was carried out according to the methodology worked out earlier [5].

In the investigated cloth the following conditions of the boiler dyeing with Indigo were reconstructed:

- Dyeing was carried out in the form of the fibre raw material (before thread production).

- The concentration of Indigo in a boiler was low.
- The concentration of restorative in a boiler was high.
- The period of dyeing was quite long.
- The dyeing was carried out only once.

It should be noted that on the surface of the blue (or green) threads of this cloth ***there are almost non-coloured fibres.*** This fact testifies to the significant destruction of Indigo in the surface fibres of the threads.

This fact allows to come to the following conclusions:

- The destruction of this kind happened during the use of the article, and not in the ground.
- The reason for such a specific destruction was the photo-destruction of the colouring in the surface layers but not the mechanical destruction of the fibres themselves.

The brown colour in tape of Sample N° 2

In the extract from brown threads the spectres of absorption of natural brown substances were obtained (Fig.17). They were compared with the earlier obtained spectres of absorption of various standard natural colourings. It appeared that the brown colours are close in their chemical nature to tanning substances. Because of the presence of significant quantities of ground pollutions it is impossible to determine in detail the concrete source of the tanning colour raw material. These colours were used for dyeing wool and silk black and brown [4]. The characteristic feature of tanning colouring was the use of salts of iron (Fe) as mordant. In order to obtain the additional confirmation of the use of tanning substances, the quantity of iron in the inner part of the fibres of brown threads was investigated. As a control, the quantity of iron in ground pollutions and in yellow threads of the same tape was also investigated.

The analysis showed that the inner part of the brown threads contains the significant quantity of iron. At the same time, its quantity in yellow fibres and in ground pollutions is significantly lower.

These facts allow to conclude that the iron salts were used as mordant in brown threads. This conclusion confirms the supposition that tanning colours were used in brown threads.

3.4.3. The possible reconstructions of the original colouristic intention in Uvek textile

The results of investigation of the colours and dyeing technology do not allow to carry out an unambiguous reconstruction of the original colouristic intention in the studied samples of the Uvek textile.

For the blue (or green) sections, as well as ***for the brown (or black)*** sections, we can ***confidently enough estimate the original colours*** even after the prolonged stay in the ground.

At the same time for the threads which after the stay in the ground and restoration look like yellow, ***it is impossible to estimate the original colours unambiguously***. As was shown in Section 3.4.2., in yellow threads of the investigated samples no original colours were found and only yellow ground pollutions are present.

This allows to give the following possible reconstructions of the original colour of yellow threads:

- The threads ***could have the original yellow colour,*** but the colours disappeared in the ground. Then the threads were coloured by the ground organic coloured substances.
- ***The threads were not coloured***, that is had the colour of natural silk. Then in the ground the threads were coloured by the ground organic coloured substances.

3.5. The set and the extent of fibre destruction

These fibre characteristics studied by microscopic method are presented in Table 2.

As can be seen from Table 2, in the fibres almost all kinds of damages characteristic for the ground conditions were found. Accumulations of spores of microorganisms on the fibre surface are absent. This could be due to their removal during restoration. Also the apertures formed due to the activity of larvae or worms are absent. Transversal folds of fibres are also almost absent.

The integrate extent of destruction can be considered moderate.

The extent of destruction of the cloth is comparable to that of the tape.

3.6. Gold weft threads in the cloth of Sample N° 1

In the cloth there were found flat gold weft threads (Fig. 2), formed according to a specific technology:

- In the central part of the thread there is a dark-brown substance (0.3–0.4 mm wide; 0.03-0.05 mm thick.).
- From both sides this substance (base) is covered with thin slips of yellowish metal (thickness – a few microns).

Thus, these weft threads are ***three-layer gold threads***, where ***the base is metallized from both sides***.

In this work the dark base and the metal layers were separately investigated. The results of the investigation are represented in Fig.8, 10a, 9a, 9b, 10b, 10c, 11, and are described below.

3.6.1. Analysis of the metal film

In Fig.9a, 9b the distributions of elements on the non-cleaned surface of metal films from gold threads are shown. In Table 3 the results of qualitative and quantitative element analysis of metal films are represented.

As can be seen from Table 3, the metal of the film is composed of gold (Au) and silver (Ag). There is no copper in metal. Elements characteristic for ground pollutions (silicon, aluminium, chlorine) are also present.

Table 2. The set of types of the extent of damage of fibres

Thread type *	Nature of textile fibres	*Presence of micro-organisms' spores*	Types of destructIons of fibres							Extent of damage
			Decrease of molecules regularity	*Transversal folds*	*Flatulencies*	*Destructions of lateral surface*	*Transversal breaks and ruptures*	*Longitudinal breaks and ruptures*	*Round, ellipsoid apertures* ***	
Cloth (Sample 1)										
1	***silk***	-	+	-	+	+	+	+	-	Moderate
2	***silk***	-	+	-	+	+	+	+	-	Moderate
3	***silk***	-	++	-	+	+	++	+	-	Large
4	***silk***	-	++	-	+	+	++	+	-	Large
5a	***Gold***	Damages in the gold surface of threads are described in the text, Section								
5b	***leather***	-	+	(?)	(?)	+	+	+	-	Moderate
Tape (Sample 2)										
6	***silk***	-	+++	-	+	+	+	+	-	Large
7	***silk***	-	+	-	+	+	++	+	-	Moderate
8	***silk***	-	+++	-	+	+	+	+	-	Moderate

Conventional Signs:
(-) – this type of the damage is absent; (+) – this type of the damage is present; (?) – the presence or absence of this type of damage can not be identified.
* Types of threads

Sample 1, Cloth (AO 1712).
1 – Thread of the binding warp
2 – Thread of the consolidating warp
3 – Thread of the background weft
4 – Thread of the silk ornament weft
5 – Flat gold thread of the ornament weft

Sample 2, Tape (AO 159).
6 – Thread of the inner warp
7 – Thread of the binding warp
8 – Thread of the weft

*** The apertures made by worms and/or larvae

Table 3. The results of the quantitative analysis of the metal composition of various sections of gold threads of the cloth (Sample N°1)

N°	*Place of making the analysis*	*Au*	*Ag*	*Al*	*Si*	*Cl*
1	Point 1*	91.89	7.62	0.49	-	-
2	Point 2**	90.25	9.75	-	-	-
3	Section ***	70.00	20.82	1.54	1.53	6.11

* The point is shown in Fig.10 a
** The point is shown in Fig.10 b
*** The section is shown in Fig.10 c

The characteristic feature of metal in these threads is the fact that it is a low-quality alloy of gold and silver. This fact is confirmed by the presence of sections with proportional (Fig.10b) and non-proportional distribution (Fig.10a) of gold and silver on the metal surface.

For the sections with the increased amount of silver the specific processes of ground destruction can be observed:

- The microscopic analysis in reflected polarized light allowed to identify the sections of destruction of the metal surface of the "oxide tints" type (Fig.8).
- The micro-probe analysis (Fig.10a) allowed to state that the destructed section appear due to silver chlorides.

3.6.2. Analysis of the base under gold

The thick brown base in gold threads at the first sight resembles the bases of gold threads in other, earlier investigated Golden Horde cloths [5]. In these cloths the bases of gold threads were made of outer parts of intestines membrane, including the muscle, serous and epithelial parts [5].

The detail investigation showed that the bases of the gold threads of Uvek cloths also consist of organic material. However, this is a different material – ***tanned leather.***

The following fact confirm this interpretation of the base nature:

- The base material consists of practically ***pure protein*** (the whole base material is fully coloured with a specific histo-chemical protein colouring 'Amido black', Fig.11). Polysaccharides are almost absent. At the same time the intestinal material only partially consists of protein, a significant amount of polysaccharides is present in it [5].
- In the microscopic section of the base material the collagen links can be clearly seen (Fig.11), which are characteristic of tanned leather but are not met in intestine [5].

Gold threads in the Uvek cloth have one more characteristic difference with the earlier investigated gold threads in the Golden Horde cloths [5]:

- In the Uvek cloth both sides of the organic base are gilded.
- In the earlier investigated Golden Horde cloths only one side is gilded [5]. This can be caused by the use of epithelial layer of intestine as the clay for gilding in these threads.

4. The detail description of textile according to the CIETA system

In this section the materials and technological modes for each investigated sample of the Uvek textile are described in detail. The textile is described according to the classical scheme of description of ancient textile articles recommended by the International Society of Studying of Ancient Textile– CIETA [6]. The detail description of textile according to CIETA system is expedient as the data on Uvek textile could be correctly compared with the description of any other cloth.

4.1. Description of the cloth (Sample 1)

General characteristic of the cloth

Article: shroud.

Place of production*:* China (?).

Time of production: 1250 – 1400.

Place of finding: the Uvek site of ancient city, an accidental find (1930s-1940s)

Materials, of which the cloth was produced**:** silk; gold threads on leather base.

Dimensions**:** area of the preserved cloth 110*107 cm; width of the weave part - ?

Place of keeping: Saratov Museum, museum No AO 1712

Condition: the cloth was restored in 1997.

Description of the cloth ornament:

- Size of the rapport: height 29 cm, width 27 cm.
- The ornament consists of placed in staggered rows 8-petal rosettes (14 x16 cm) and squares (15 x14 cm), filled with floral ornament (Fig.1).

Colour characteristics. After the stay in the ground and the following restoration the cloth is perceived in the following way: on the green and gold background there is a yellow ornament.

The technical analysis

Ornament orientation. The ornament of the cloth is perceived in any direction.

Type of the cloth: Brocade, made in Lampas technique.

Structure of the cloth

The scheme of textile weave of this cloth is given in Fig.2. Microphotographs of the cloth from the right and wrong sides are given in Fig.3.

In the process of weaving two systems of warp threads and three systems of weft threads took part.

Warp threads:

- *The binding warp* forms the basic cloth, binding the warp threads with the background weft threads;
- *Consolidating warp* strengthens the threads of gold and of ornament weft, which, passing from the right to the wrong sides of the cloth, form the ornament.

Weft threads:

- *The background weft* forms the basic cloth;
- *The ornament weft* of gold threads;
- *The ornament weft* of silk threads.

The system of background formation. The cloth background is formed by the linen weave of the binding warp and the background weft threads (1:1). The warp threads almost completely cover the weft threads, this type of linen weave being called reps.

The system of weave ornament formation. On the background the ornament is formed by the ornament-creating wefts of silk and gold threads. These threads are held in the cloth by the threads of consolidating warp under the system of serge weave (1:3). The serge direction is Z.

The technological characteristics of threads

The warp

Correlation between the numbers of threads of different warps in one rapport**:** 2 threads of binding warp and 1 thread of consolidating warp.

Binding warp: silk. Thread of the second sequence with a very loose S-twist (pitch 2.00 mm) consists of two threads of the first sequence with a loose Z-twist (pitch 1.40 mm) with the thickness of 0.10 – 0.15 mm. The total thickness of the threads is 0.20 – 0.30 mm. The colour is green.

Consolidating warp**:** silk. Thread of the first sequence with a loose Z-twist (pitch 1.40 mm), with the thickness of 0.10 – 0.15 mm. The colour is yellow.

Ornament pitch: two threads of binding warp.

***Density of the cloth*:** 40 threads of the binding and 20 threads of the consolidating warp per 1 cm.

Wefts

Correlation between the numbers of threads of different wefts in one weave rapport. 1 background weft, followed by ornament-creating wefts for each weft pass.

Background weft: silk, without twist; 0.30 – 0.40 mm thick, green colour.

Ornament-creating weft of gold threads: the gold thread is flat, 0.40 – 0.45 mm wide, 0.03 mm thick.

Ornament-creating weft of silk threads: silk, without twist; 0.30 – 0.40 mm thick, yellow colour.

Ornament pitch: one weft pass.

***Density*:** 16 weft threads per 1 cm.

Note. Gold threads created the ornament background: gold on green, leaving the green contour around the yellow ornament.

The reconstruction of the weaving process

Calculation of the number of warp and weft threads for creating the rapport:

- ***Dimensions of the rapport:*** height 29 cm, width 27 cm.
- ***Number of binding warp threads***, necessary for one technically repeated unit of ornament (density of the binding warp – 40 threads per cm multiplied by the width of the ornament – 27 cm) = 1080 threads.
- ***Number of consolidating threads of the warp***, necessary for one technically repeated unit of ornament (density of the consolidating warp – 20 threads per cm multiplied by the width of the rapport – 27 cm) = 540 threads.
- ***Number of weft threads***, necessary for one technically repeated unit of ornament (density of the weft – 16 threads per cm multiplied by the height of the rapport – 29 cm) = 464 threads. That is, it is necessary to make 464 single passes of the green background weft, 464 passes of a gold thread and 464 passes of the silk yellow weft thread.
- ***For weaving of one unit of the rapport*** it is necessary to tuck in a loom 1080 threads of binding and 540 threads of consolidating warp, that is the total of 1620 threads.
- ***For weaving of the rapport 29 cm high and 27 cm wide*** it was necessary to have weft threads according to the following calculation: the number of weft threads passes for making a rapport (464) multiplied by the width of the rapport (27 cm). That is, 125.28 m of green weft threads, 125.28 m of yellow weft threads and 125.28 m of gold threads were needed.

The reconstruction of the weaving device

The technology of reconstruction of a loom on the basis of the structure of textile weave was taken from publication [6].

Obviously, for the production of the cloth shown in Fig.2 the following reconstruction of a loom can be made:

- For weaving of such a cloth 6-remises with two frames is necessary
- One frame holds the binding warp (2nd remises), and the second frame - the consolidating warp (4th remises). The frames work in turn.

4.1. Description of the tape (Sample 2)

General characteristics

Article: a waist-belt made of tape.

Place of production: ? Import or local production from imported raw materials are possible.

***Time of production**:* 1250 – 1325.

***Place of finding**:* the Uvek site of ancient city, crypt burial, excavations by F.V.Ballod (1919)

Materials, of which the tape is produced: silk.

***Size*:** the area of the fragmentary preserved cloth about 1.6*6 cm.

Place of keeping: Saratov Museum, museum N° A 2377, AO 159.

Condition: *Good*.

Description of the ornament on the cloth:

- The ornament is formed by different-coloured weft and warp threads. The light warp threads interweave and create a shape of plaits which pass vertically on the dark background made by weft threads.

***Colour characteristics*.** Light "plaits" on dark background.

Technical analysis

Structure of the tape.

The scheme of textile weave of this cloth is given in Fig.14.

This tape was woven ***on square wooden planks with 4 apertures***.

In the weaving of the tape were used ***two systems of warp threads: light and dark.***

The threads of the light warp pass through the plank apertures, and dark threads pass between the planks:

- ***The light, binding warp*** – binds the weft threads and creates an ornament in the form of plaits;
- ***The dark, inner warp*** – creates the volume and makes the tape firm. This warp does not show on the surface, always staying between the two layers of weft threads.

In weaving of the tape ***one system of weft threads*** was used.

Technological characteristics of threads

The warp.

***The correlation between the threads of different warps in one weaving rapport*:** 8 threads of the binding warp pass

through apertures in two neighbouring planks, then go two threads stretched straight without planks.

The binding warp: silk, the threads of the first sequence with loose Z-twist (twist pitch 2.00 mm); thickness 0.30 – 0.35 mm; colour – yellow.

Inner warp: silk, thread of the first sequence with loose Z-twist (pitch can not be defined), 0.25 – 0.30 mm thick. Colour – brown.

Density of the tape*:* 25 threads of the binding and 5 threads of the inner warp per 1 cm.

The wefts.

The correlation between the number of threads of different wefts in one rapport**:** in the tape only one system of weft threads was used.

The weft*:* silk, without twisting; thickness 0.75 mm, colour – brown.

Ornament pitch*:* one pass of weft.

Density**:** 13 weft threads per 1 cm.

The reconstruction of the tape structure and the weaving procedure

Calculation of the number of weft and warp threads for weaving the tape:

- Width of the tape 1.6 cm (measured by a photograph).
- Number of binding warp threads, necessary for weaving (density of the binding warp – 25 threads per cm multiplied by the width of the tape – 1.6 cm) = 40 threads.
- Number of inner warp threads – 8.
- Number of weft threads, necessary for making 1 m of the tape according to the following calculation (density of the weft – 13 threads per cm multiplied by 100 cm) = 1300 rows, which should be multiplied by the width of the tape – 1.6 cm. Thus, for weaving of 1 metre of 1.6 cm wide tape 21 m of weft threads were necessary.

Reconstruction of the loom

The modes of reconstruction of the loom depending on the structure of textile weave were taken from suggestion[7].

Obviously, for the production of the tape shown in Fig.14, the following reconstruction of the corresponding loom can be made:

- For weaving of such a tape 10 planks with 4 apertures were necessary.
- In each row the neighbouring planks were turn in different direction by 180 degrees.

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Fig.1-11. The Golden Horde cloth of the XIIIth – XIVth centuries from Uvek.

Fig.1. The general sight of the Golden Horde cloth of the XIIIth – XIVth centuries from Uvek.

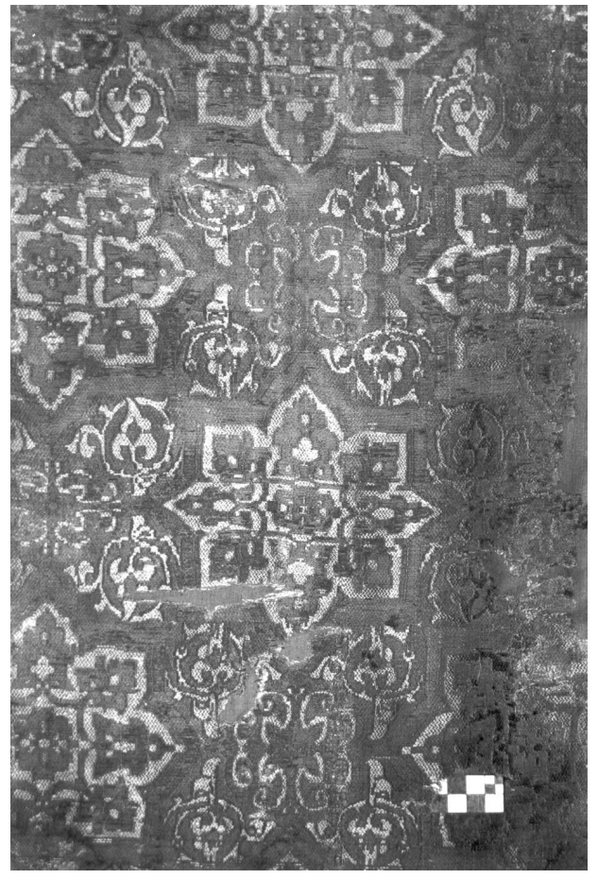

Fig.1a. The general sight of the Golden Horde cloth of the XIIIth – XIVth centuries from Uvek (larger magnification).

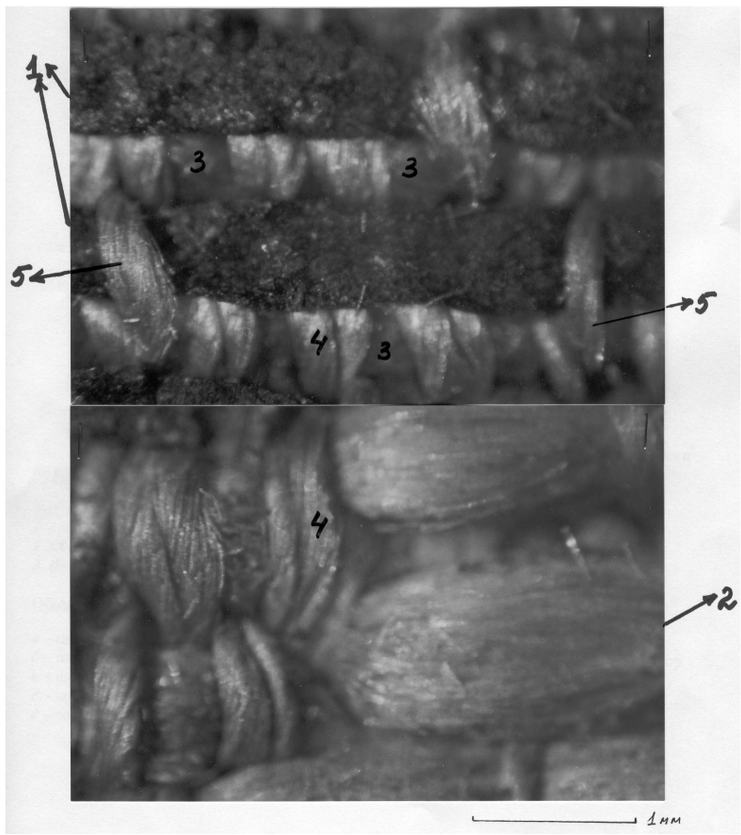

Fig. 2. Microphotographs of two sides of the Golden Horde cloth of the XIIIth – XIVth centuries from Uvek in reflected polarized light
A – right side. # – wrong side.
1 – Gold ("metallized") weft threads. ***2*** – Silk non-spun threads of yellow weft. ***3*** - Silk non-spun threads of green weft. ***4*** - Silk spun threads of binding warp. ***5 -*** Silk spun threads of the warp consolidating the gold threads

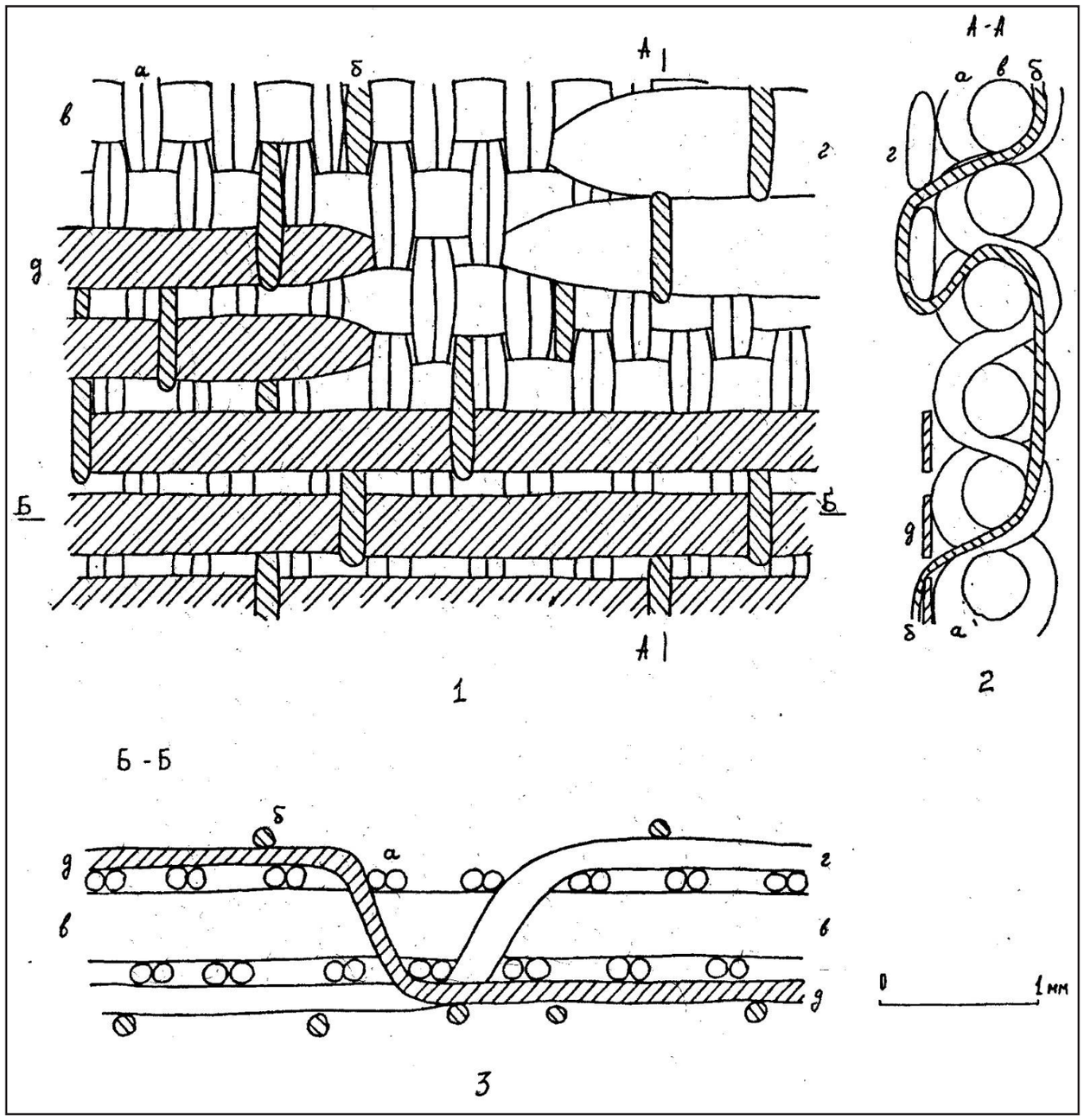

Fig. 3. Scheme of textile weave of the Golden Horde cloth of the XIIIth – XIVth centuries from Uvek.
The thickness of threads and distances between them are shown in the ratio given on the scale
in the right bottom part of the picture

Conventional Signs:

1 – Right side of the cloth.

2 (A-A) – A cut along the warp thread.

3 (B-B) – A cut along the weft thread.

Signs for various types of threads

а – silk binding warp.

b– silk - warp consolidating the gold and weft threads, forming the ornament.

в– silk - background weft.

г– silk - weft, forming the ornament.

д – gold weft, forming the ornament.

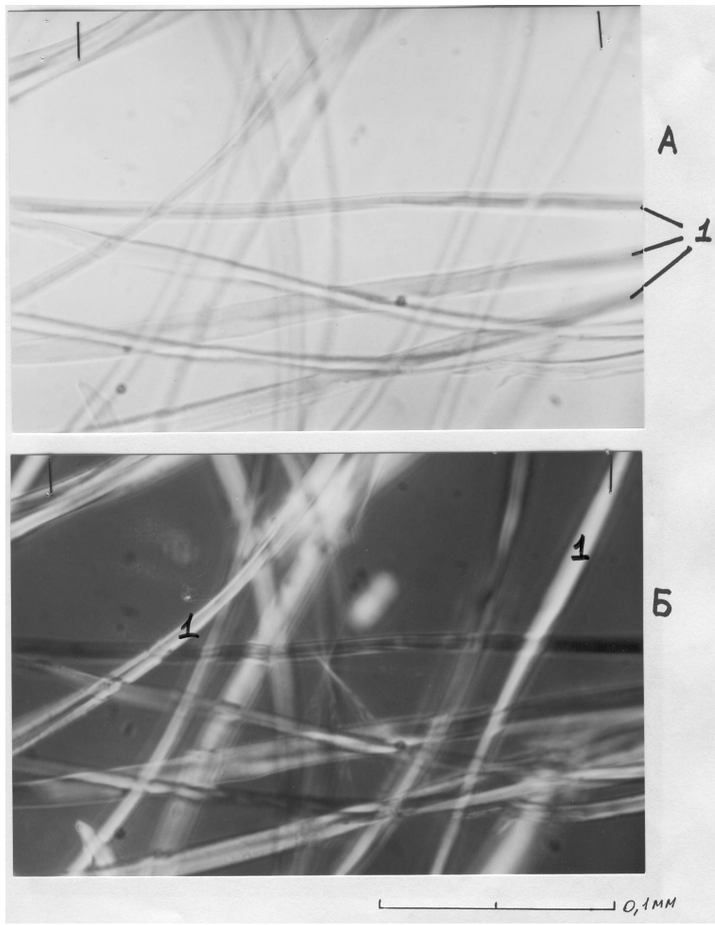

Fig. 4. Microphotographs of yellow warp threads of the Golden Horde cloth of the XIIIth – XIVth centuries from Uvek in permeating polarized light
A – polarizer and analyser are parallel.
B – polarizer and analyser are perpendicular.
1 – Silk fibres.

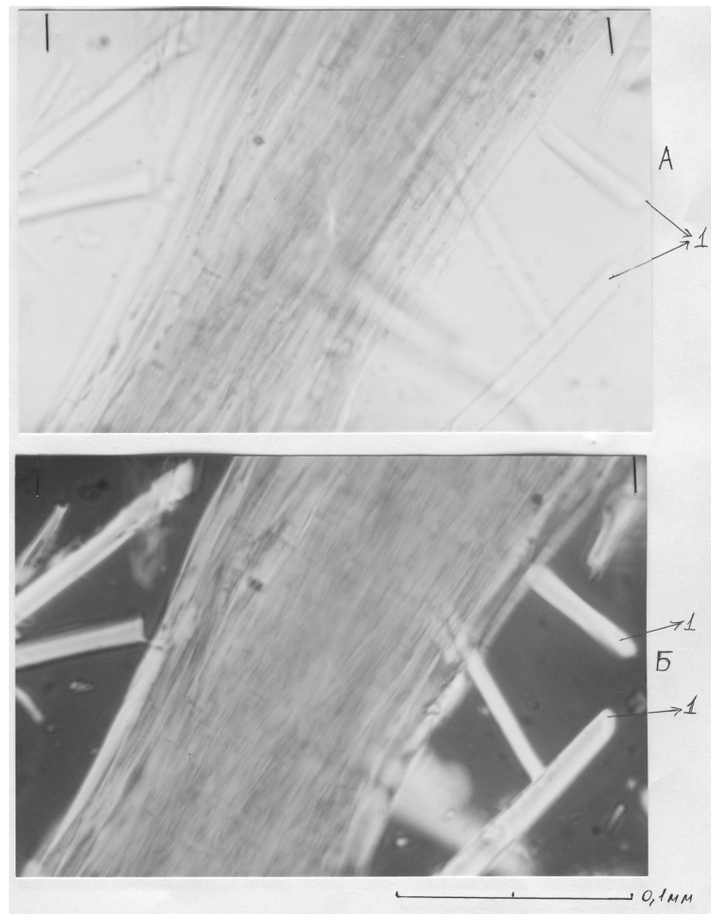

Fig. 5. Microphotographs of yellow weft threads of the Golden Horde cloth of the XIIIth – XIVth centuries from Uvek in permeating polarized light
A – polarizer and analyser are parallel.
B – polarizer and analyser are perpendicular.
1 – Silk fibres.

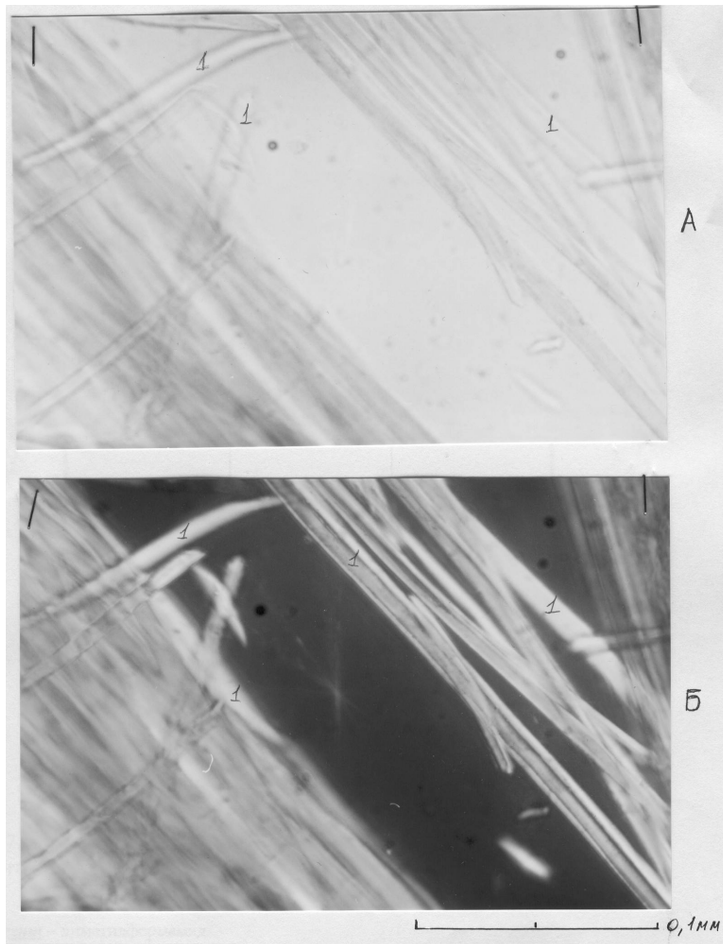

Fig. 6. Micro-photographs of green weft threads of the Golden Horde cloth of the XIIIth – XIVth centuries from Uvek in permeating polarized light (fractions of blue colouring Indigo are very small and can not be clearly seen in the photograph of fibres)
A – polarizer and analyser are parallel.
B – polarizer and analyser are perpendicular..
1 – Silk fibres.

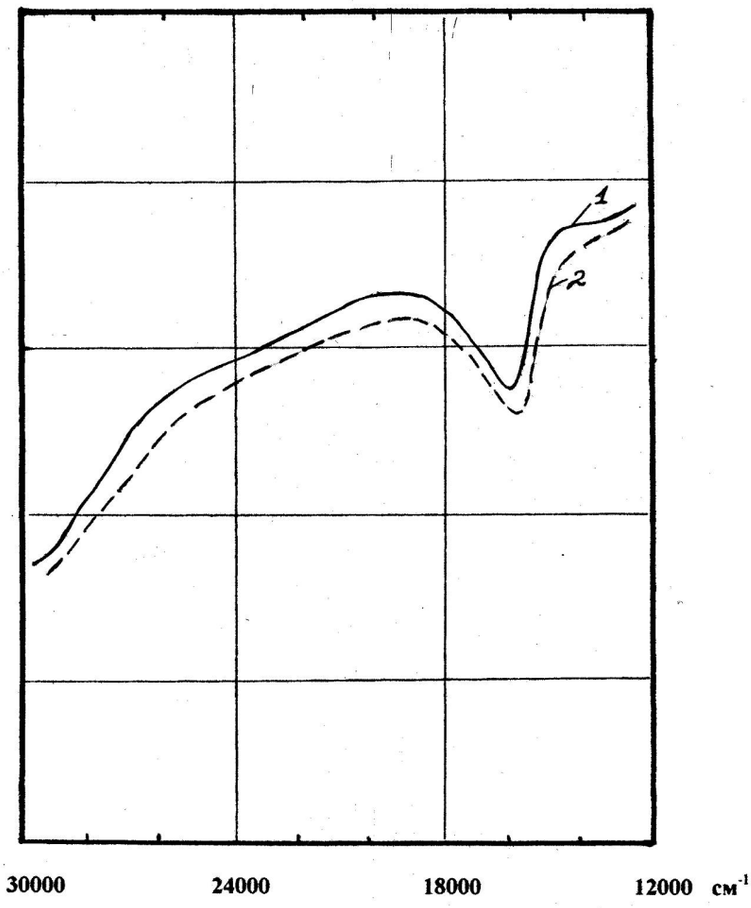

Fig. 7. Spectre of absorption in the visual section of blue colouring from the green warp and weft threads of the Golden Horde cloth of the XIIIth – XIVth centuries from Uvek Spectres of absorption are registered for the colouring extracts
Extractor – dimetilformamid.
1. – extract from threads.
2. – standard extract of Indigo.

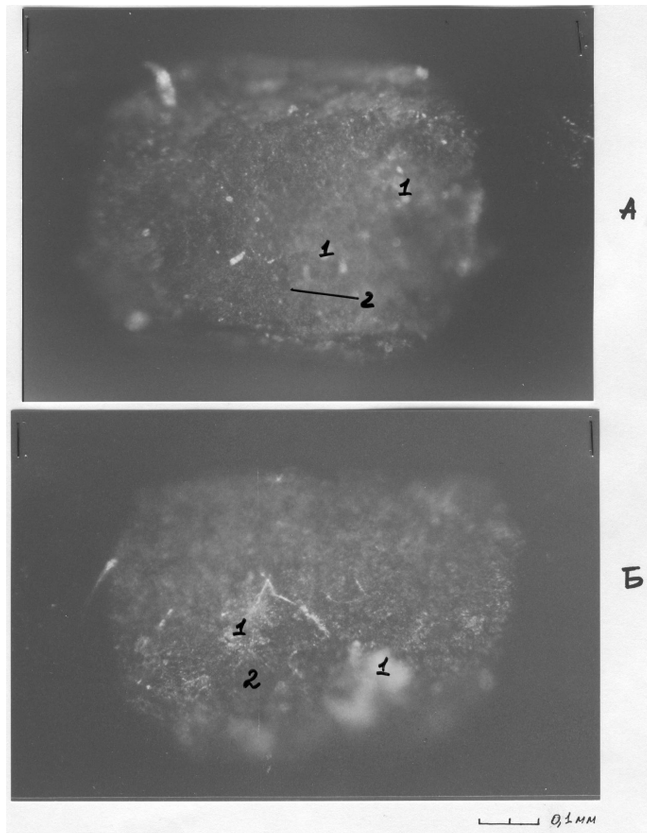

Fig. 8. Micro-photographs of the gold (“metallized”) threads of the Golden Horde cloth of the XIIIth – XIVth centuries from Uvek in reflected polarized light

A – the right side of threads.
B – the wrong side of threads.
1 – Ground fall-outs on the surface of threads.
2 – Possible products of interaction of threads silver with the ground chlorides.

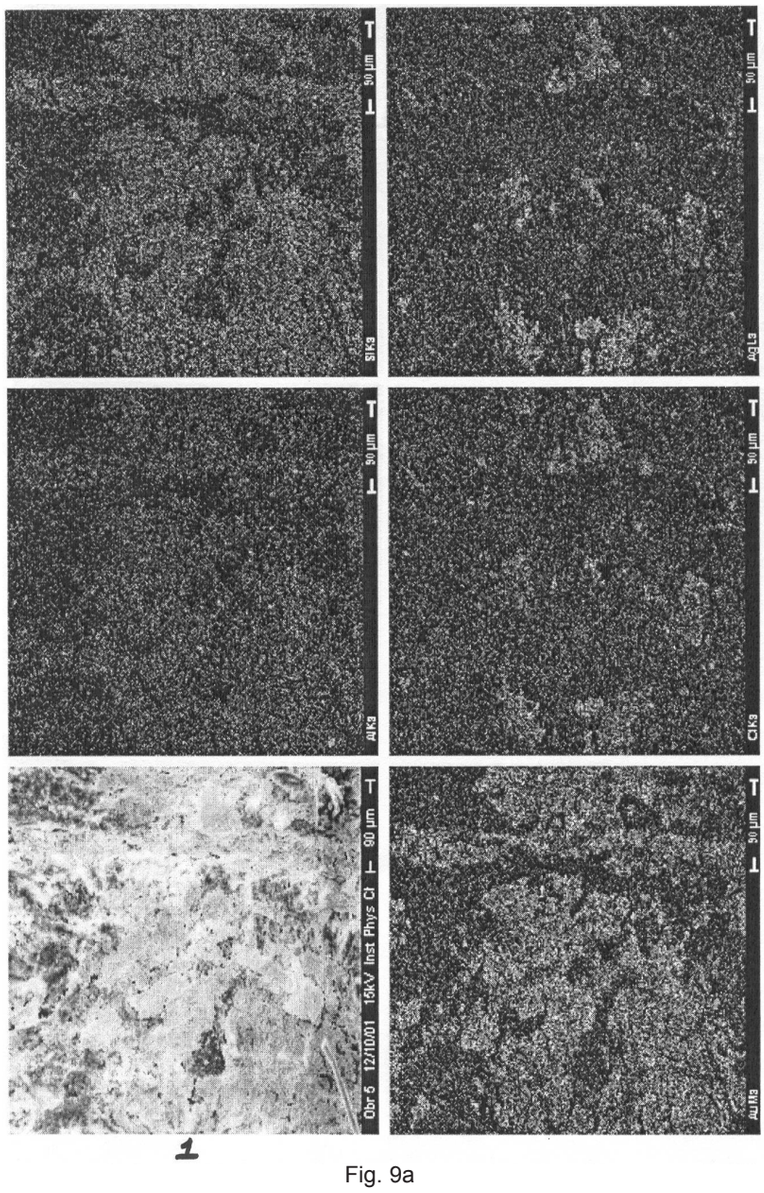

Fig. 9a

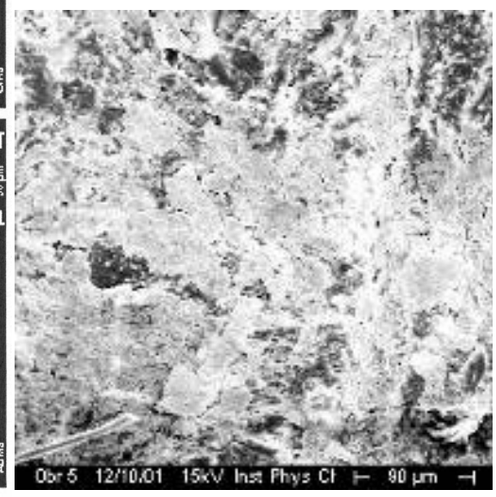

Fig. 9a1

Fig. 9. Distribution of elements Au (gold), Ag (silver), Cl (chlorine), Si (silicon), Al (aluminium) on the surface of weft gold threads of the Golden Horde cloth of the XIIIth – XIVth centuries from Uvek
1 – the electronic-microscopic image of the surface of threads

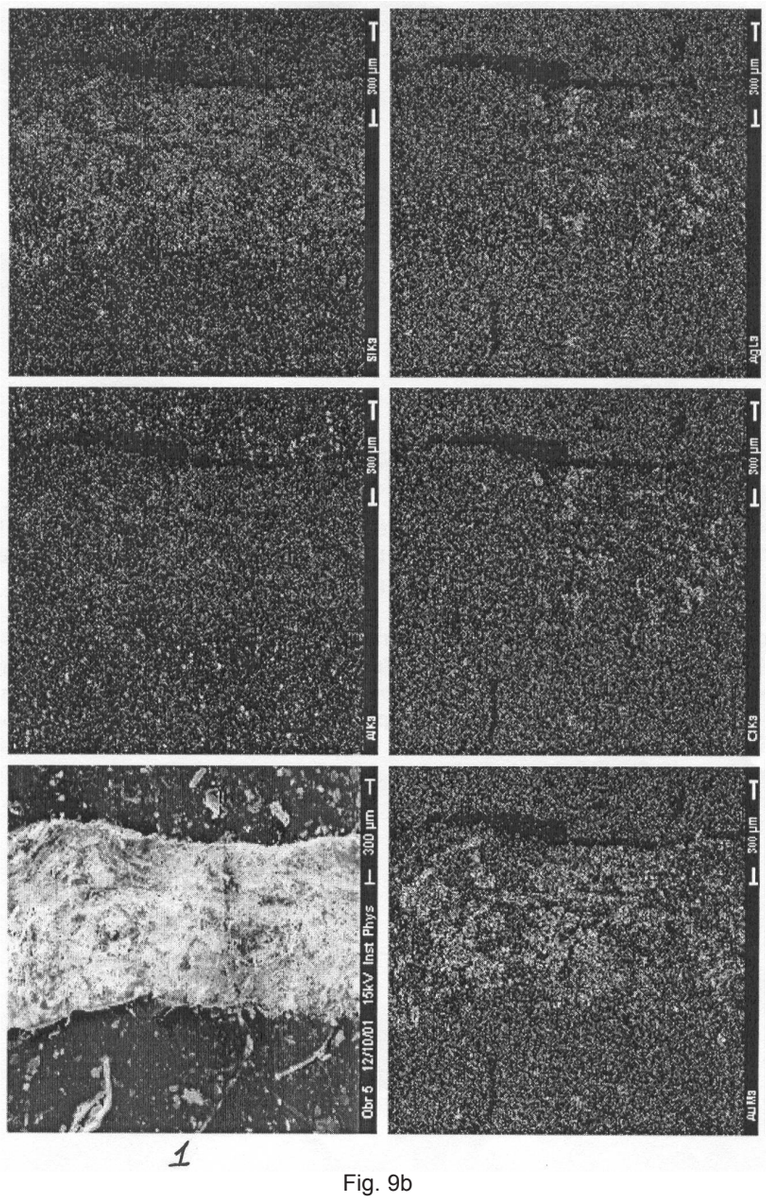

Fig. 9b

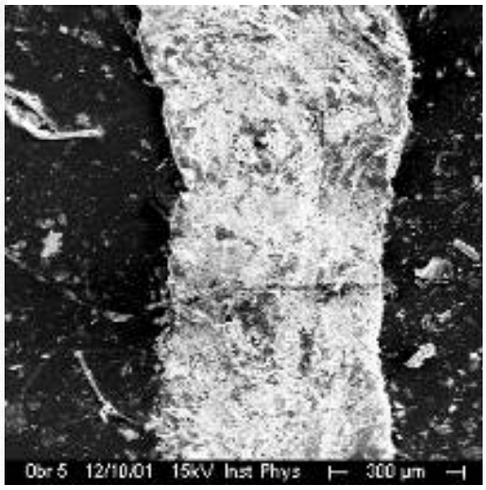

Fig. 9b1

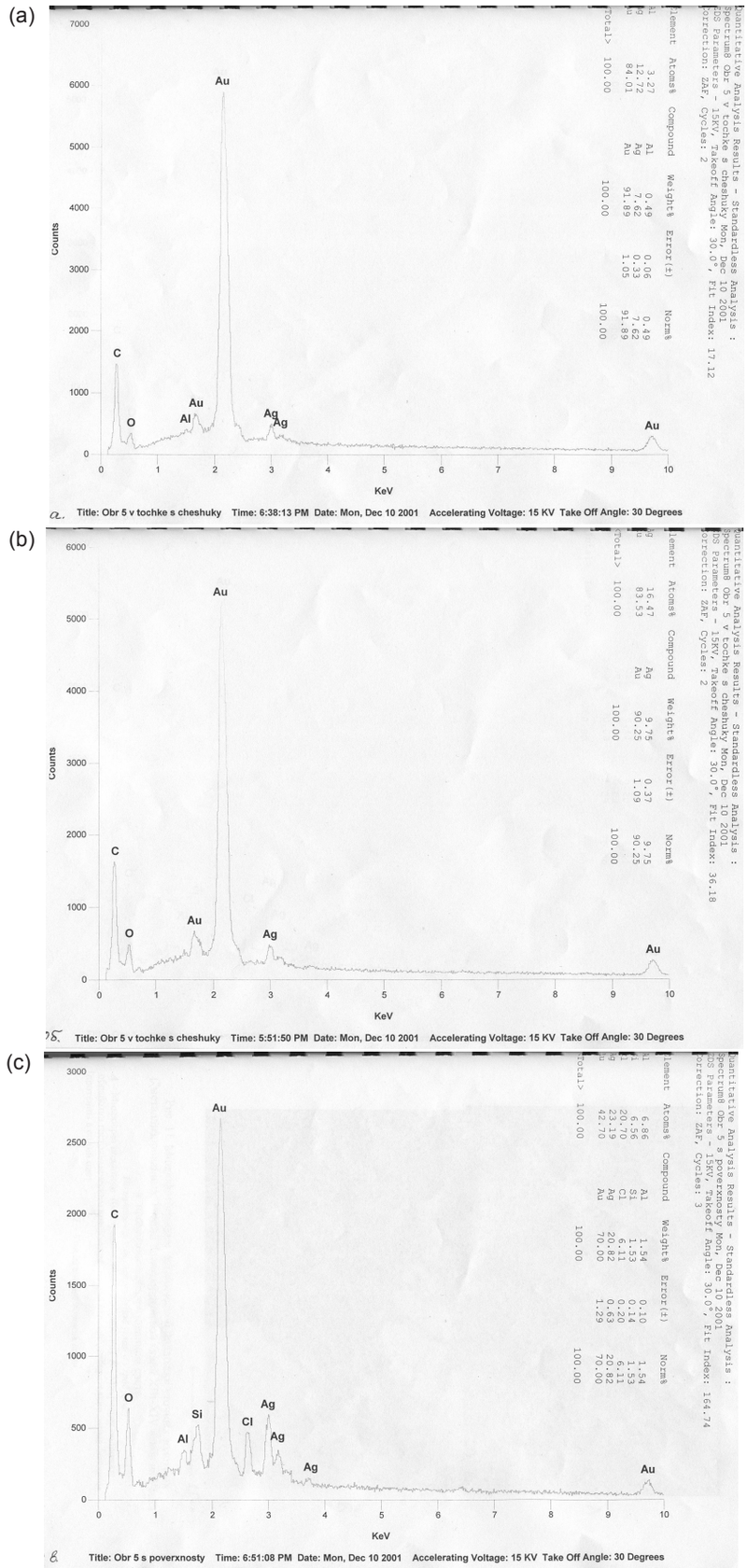
(a)
Quantitative Analysis Results - Standardless Analysis :
Spectrum8 Obr 5 v tochke s cheshuky Mon, Dec 10 2001
EDS Parameters - 15KV, Takeoff Angle: 30.0°, Fit Index: 17.12
Correction: ZAF, Cycles: 2
Element Atoms% Compound Weight% Error(±) Norm%
Al 3.27 Al 0.49 0.06 0.49
Ag 12.72 Ag 7.62 0.33 7.62
Au 84.01 Au 91.89 1.05 91.89
Total> 100.00 100.00 100.00
Counts
KeV
C
O
Au
Al
Ag
Ag
Au
Title: Obr 5 v tochke s cheshuky Time: 6:38:13 PM Date: Mon, Dec 10 2001 Accelerating Voltage: 15 KV Take Off Angle: 30 Degrees
(b)
Quantitative Analysis Results - Standardless Analysis :
Spectrum8 Obr 5 v tochke s cheshuky Mon, Dec 10 2001
EDS Parameters - 15KV, Takeoff Angle: 30.0°, Fit Index: 36.18
Correction: ZAF, Cycles: 2
Element Atoms% Compound Weight% Error(±) Norm%
Ag 16.47 Ag 9.75 0.37 9.75
Au 83.53 Au 90.25 1.09 90.25
Total> 100.00 100.00 100.00
Counts
KeV
C
O
Au
Ag
Au
Title: Obr 5 v tochke s cheshuky Time: 5:51:50 PM Date: Mon, Dec 10 2001 Accelerating Voltage: 15 KV Take Off Angle: 30 Degrees
(c)
Quantitative Analysis Results - Standardless Analysis :
Spectrum6 Obr 5 s poverxnosty Mon, Dec 10 2001
EDS Parameters - 15KV, Takeoff Angle: 30.0°, Fit Index: 164.74
Correction: ZAF, Cycles: 3
Element Atoms% Compound Weight% Error(±) Norm%
Al 6.86 Al 1.54 0.10 1.54
Si 6.56 Si 1.53 0.14 1.53
Cl 20.70 Cl 6.11 0.20 6.11
Ag 42.79 Ag 20.82 0.63 20.82
Au Au 70.00 1.29 70.00
Total> 100.00 100.00 100.00
Counts
KeV
C
O
Si
Al
Cl
Ag
Ag
Ag
Au
Title: Obr 5 s poverxnosty Time: 6:51:08 PM Date: Mon, Dec 10 2001 Accelerating Voltage: 15 KV Take Off Angle: 30 Degrees

Fig. 10. Spectres of X-ray fluorescence of the surface of weft gold threads of the Golden Horde cloth of the XIIIth – XIVth centuries from Uvek, obtained by the method of micro-probe analysis

10 a, 10* b** – Spectres are obtained in points with relatively high content of ***Au (gold) and relatively low content of ***Ag*** (silver).

10 c – Spectres are obtained from a large area of the surface of threads, which leads to the relative increase of the content of ***Ag*** (silver).

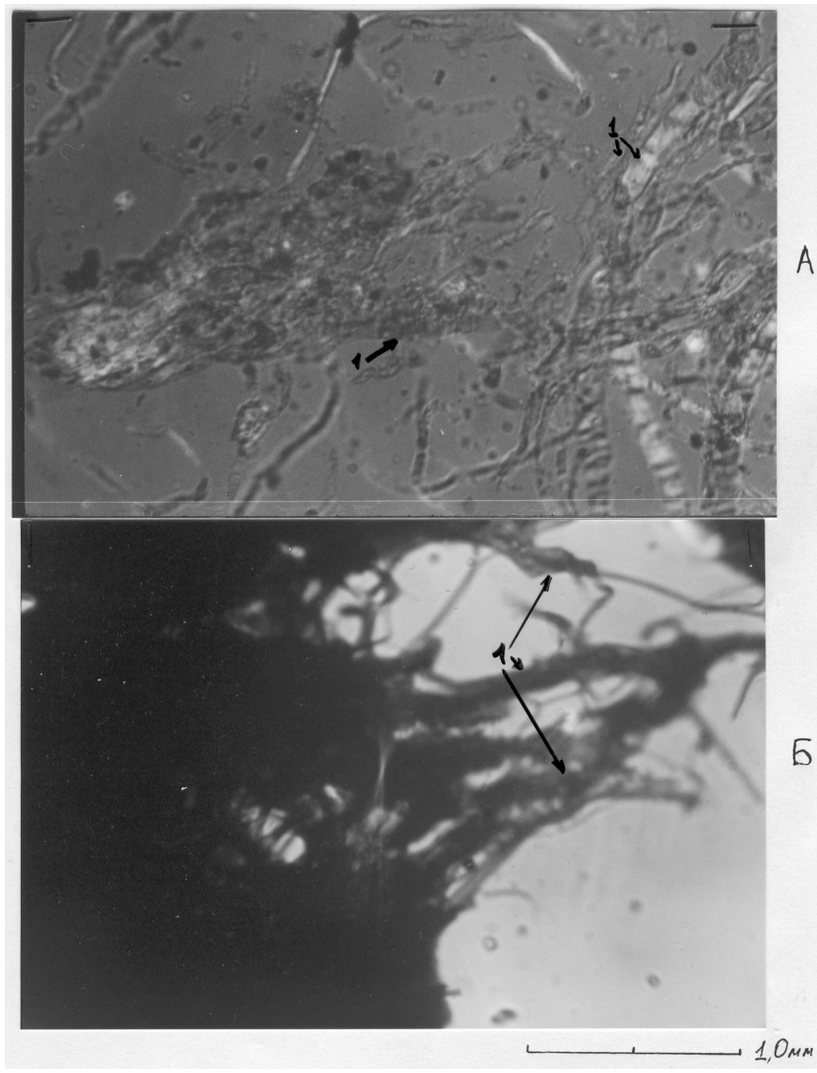

Fig. 11. Micro-photographs of the organic base of the weft gold (“metallized”) threads of the Golden Horde cloth of the XIIIth – XIVth centuries from Uvek in permeating polarized light
Polarizer and analyser are at an angle of 45 degrees.
A **–** Micro-section of the base (without preceding processing).
B – Micro-section of the base is processed with histo-chemical colouring “Amido black”, selectively colouring proteins blue
1 – Collagen fibres of leather.

Fig. 12-17. The Golden Horde tape of the XIIIth – XIVth centuries from Uvek

(***А***)

(**Б**)

Fig. 12. Macro-photographs of the general sight of the right ***(А)*** and wrong ***(Б)*** sides of the Golden Horde tape of the XIIIth – XIVth centuries from Uvek and accompanying metal articles
1 – Belt buckle. ***2*** – Ring

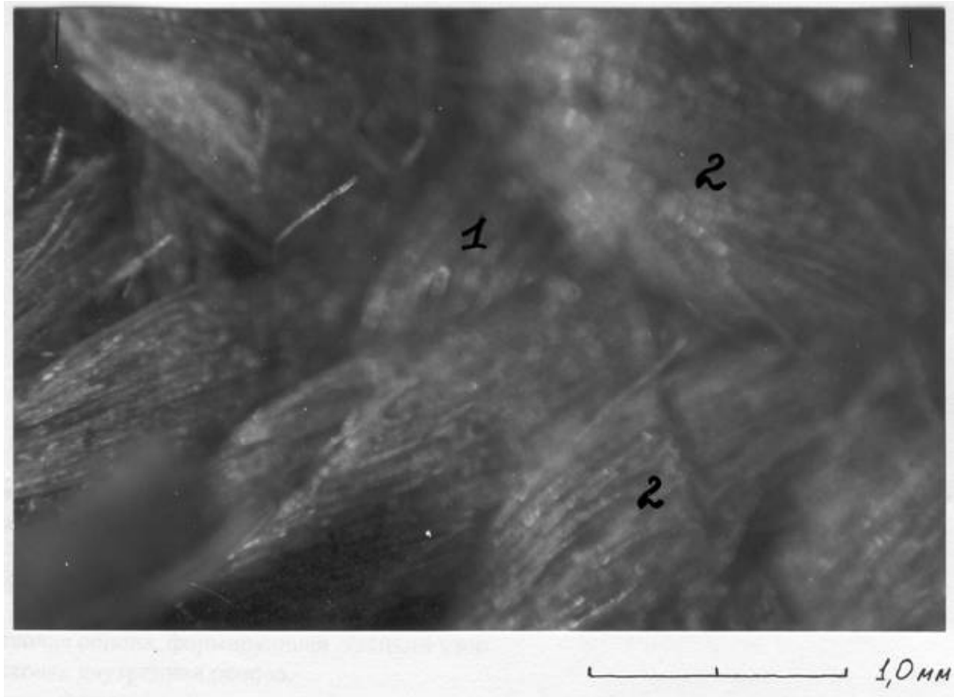

Fig. 13. Micro-photograph of the right side of the Golden Horde tape of the XIIIth – XIVth centuries from Uvek in reflected polarized light
1 – Silk threads of brown weft. ***2*** – Silk threads of brown warp

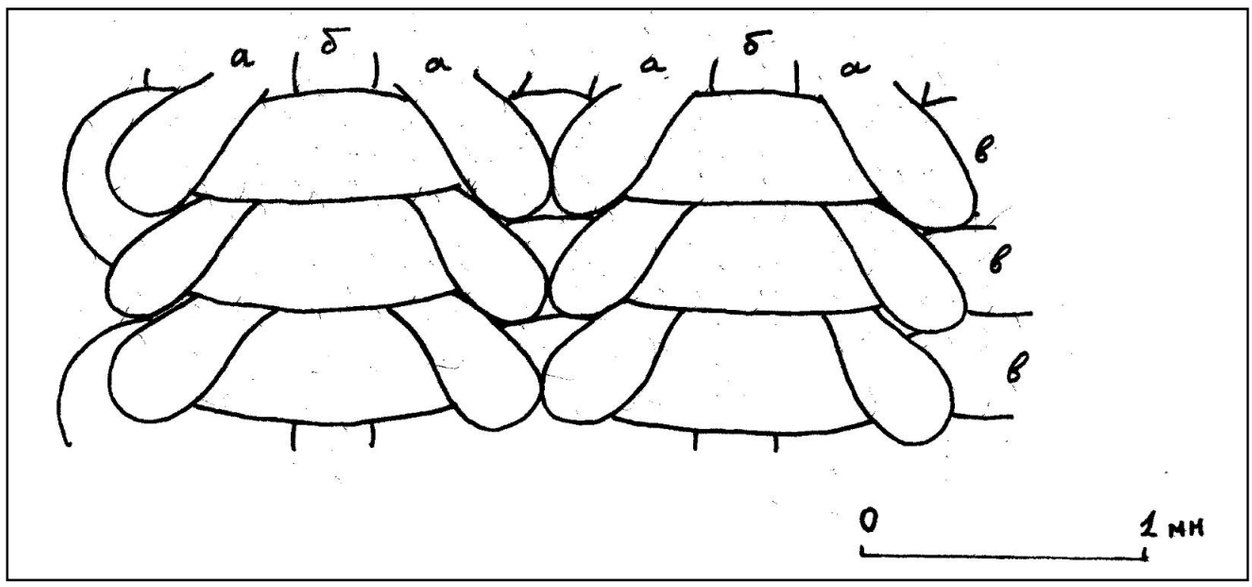

Fig. 14. Scheme of textile weave on the right side of the Golden Horde tape of the XIIIth – XIVth centuries from Uvek
The thickness of threads and distances between them are shown in the ratio given on the scale in the right bottom part of the picture
Conventional signs of various types of threads:
а – silk warp, forming the ornament.
б – silk inner warp.
в – silk weft.

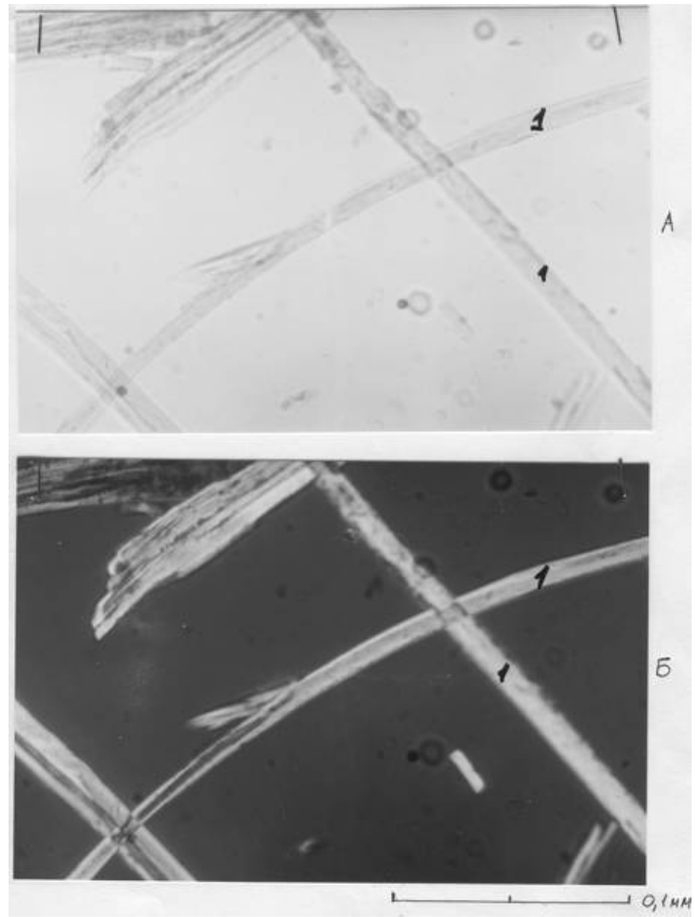

Fig. 15. Micro-photographs of yellow warp threads of the Golden Horde tape of the XIIIth – XIVth centuries from Uvek in permeating polarized light
А – polarizer and analyser are parallel.
Б – polarizer and analyser are perpendicular.
1 – Silk fibres.

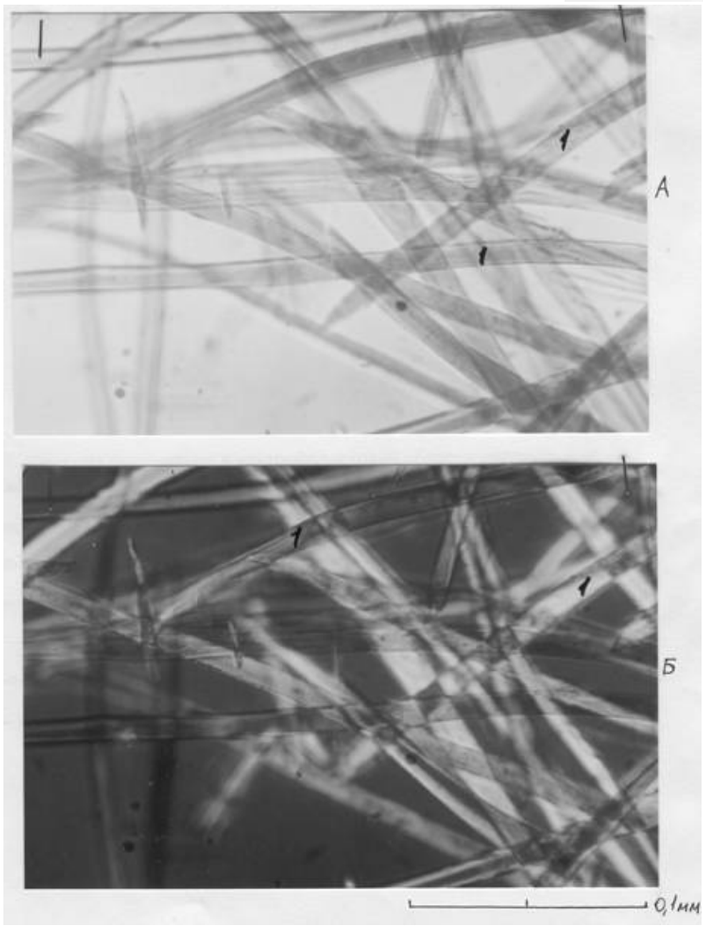

Fig. 16. Micro-photographs of brown warp threads of the Golden Horde tape of the XIIIth – XIVth centuries from Uvek in permeating polarized light
А – polarizer and analyser are parallel.
Б – polarizer and analyser are perpendicular.
1 – Silk fibres.

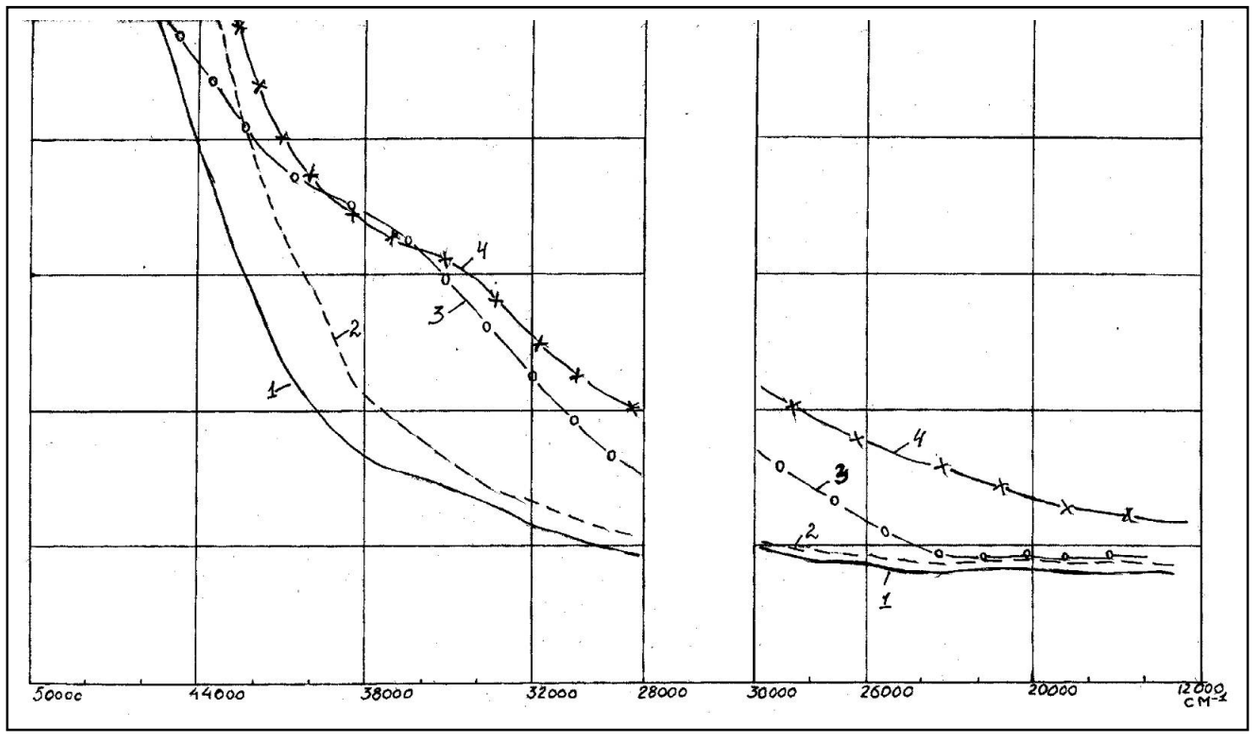

Fig. 17. Spectres of absorption in the ultra-violet section of the extracts from brown warp threads of the Golden Horde tape of the XIIIth – XIVth centuries from Uvek

Extractor – a mixture (ethanol : water : complexon DTPA).

Conventional signs on spectres:

1. – extract from the light warp threads (pH = 7).
2. – extract from the light warp threads (pH = 10).
3. – extract from the brown warp threads (pH = 7).
4. – extract from the brown warp threads (pH = 10).

APPENDIX 4.

YU.A. SEMYKIN, L.F. NEDASHKOVSKY

The results of metallographic analyses of ferrous objects from Hmelevskoe I settlement[1]

In 2001 the Chief curator of Archaeological Museum of Kazan State University L.F.Nedashkovsky delivered the collection of ferrous objects of 80 items, originating from Hmelevskoe I settlement, to the Archaeological laboratory of Ulyanovsk State Pedagogical University.

The settlement is situated in the Saratov region and refers to the culture of the Golden Horde. The monument dates back mainly to the end of the XIIIth – XIVth centuries. The collection comes both from the trenches and from the materials found on the territory of the settlement. The preservation of many objects of ferrous metal is satisfactory, which is in general usual for the iron objects coming from the Golden Horde monuments of the Low Volga region.

In the collection according to the functional purpose the following groups of categories and categories of objects are allocated:

1) Fastening material, used for the linkage of parts in wooden constructions and for household purposes. This includes: nails of various sizes – 21 items: (analyses: NN: 962, 985, 986, 992, 1003, 1007, 1009, 1018, 1020, 1021, 1022, 1030, 1075, 1079, 1081, 1086, 1088, 1089, 1096, 1102, 1107), 11 items of pivots: (analyses NN: 991, 996, 997, 1076, 1077, 1001, 1003, 1004, 1017, 1019, 1095) and 5 items of cramps and their fragments: (analyses NN: 1006, 1013, 1014, 1026, 1104). 1 item of a dowel is functionally close to this group of wares: (analysis N 1090).

2) Household knifes of various sizes and purposes: 23 items: (analyses NN: 960, 966, 967, 972, 973, 974, 976, 977, 979, 981, 994, 998, 1005, 1011, 1024, 1025, 1032, 1037, 1072, 1078, 1084, 1091, 1094). The data are available for 15 knifes.

3) The household objects are represented by 8 items of keys from cylindrical locks: (analyses NN: 958, 961, 975, 982, 984, 995, 1016, 1085) and 1 item of a lock - analysis N 1108. Needles in the collection are represented by 1 item: analysis N 980. 2 items of awls are also investigated: analyses NN: 1101, 1105.

4) The details of costume in the investigated collection are represented: by 1 item of a fibula - (analysis 978), and also buckles and details from them: (analysis N 971 - plate from a buckle), (analysis N 988 - framework from a buckle), (analysis N 1103 - tip from a buckle), (analysis 1106 – a buckle, 1106a - frame of a buckle, 1106b – end of buckle tip).

5) To wares of special purpose (for movement on ice) concerns an ice-walking thorn (analysis N 959).

6) In the investigated collection 5 items of door eyes are represented: (analyses NN 964, 969, 1031, 1082, 1092b), and 1 item of a door overlay: analysis N 1092. 6 various rings and links from chains are functionally close to the same group: (analyses: 963, 969, 970, 1023, 1087, 1100) and 1 item of a hook: (analysis N 1073).

7) Wood-processing tools in the collection are represented by 2 items of axes. However, both analyses are taken from fragments of one axe: analyses NN 1099 (fragment of an edge), a haft from an axe.

8) The instruments for tillage in the collection are represented by a plough knife.

9) The subjects of arms in the collection appeared to be represented by 5 items of arrowheads: (analyses NN 968, 990, 999, 1027, 1033).

10) Three wares refer to the subjects of uncertain purpose: analyses NN: 989, 1000, 1083.

Technology of manufacturing of knifes

The most significant technological group among the metallographically investigated knifes was formed by wares forged from unfinished wares of pure steel - 8 knifes from 15: NN 967, 972, 973, 974, 976, 977, 994, 998 (53.3%). The metal of unfinished wares of this group of knifes appeared to be rather pure and well forged. Only in metal of a knife (analysis N 977) a lot of slag inclusions can be seen. Among pure steel knifes 4 items (analyses NN 972, 973, 976, 998) have passed heat treatment - soft tempering. Microstructure of tempered steel on garters from these knifes is sorbit and troostit.

On knifes NN 973, 974, 994 and 998 the traces of application of smith welding are marked. This operation, judging by high quality of welding seams, was executed quite successfully.

On four knifes from the pure steel technological group (analyses NN 967, 974, 977, 994) the signs of heat treatment are not revealed. The structure of ferrite-perlite testifies to it.

On a knife N 967 the traces of decarbonising are seen, that

[1] This work was supported by the Research Support Scheme of the Open Society Support Foundation, grant No: 1001/2000. Work was made with the support of programme 'Universities of Russia' (grant No UR.10.01.037).

could be the result of overheating of the knife in a smith furnace at the time of forging.

One item of a knife (analysis N 60) was forged from unfinished ware of batch metal. The strips of low-carbon steel on garter alternate with strips of bloom iron. Microstructure is ferrite-perlite and ferrite. The quality of smith welding is not absolutely good. Welding seams are sometimes stuck with slag inclusions.

On three knifes there is the technological circuit of cementation (analyses NN 966, 987, 965). The basic body of knifes of this technological group was forged from bloom iron. Thus the metal is badly forged. On the unetched garters plenty of slag and non-metal inclusions are observed. And on tips of wedge edges of knifes of the given group the sections of steel ferrite-perlite microstructure concentrate. Thus transition from ferrite to ferrite-perlite is smooth, without welding seams.

Among the knifes with traces of cementation on one item - N 987 - the traces of soft tempering as sorbit microstructure are observed.

In a single item among the metallographically investigated knifes the technological circuit of two strips of welding - from strips of bloom iron and of high-carbon steel is allocated. The metal is considerably littered with non-metal and slag inclusions. In a steel zone the microstructure of tempered steel – martensit - is observed.

Metallographic analyses of objects of fixing purpose have shown, that the nails and dowels were made by the smiths with application of three various technological circuits:

1) Of usual bloom iron and non-homogeneously carbonised raw steel - 20 wares. 1a - from bloom iron the following items of wares were forged: analyses NN 985, 991, 992, 997, 1001, 1004, 1007, 1018, 1019, 1020, 1075, 1086. 1b - from raw non-homogeneously carbonised raw steel were forged the items of wares NN: 986, 1003, 1009, 1015, 1017, 1079, 1089, 1012. On a nail 1089, probably as a result of cooling in water, the structure of tempered steel - sorbit - was formed.

2) From semi-finished ware of batch metal one ware (analysis N 962) was forged.

3) From semi-finished wares of pure steel nine items of wares were forged: NN: 1074, 1076, 1077, 1081, 1088, 1096, 1097, 1102, 1107.

It is interesting, that almost all pure steel nails and dowels have passed heat treatment - soft tempering, thus sorbit-trostit structures were formed in metal. It is quite rational for improvement of working properties of nails and dowels (tempered steel nails will not bend at hammering them into a firm wood. Soft tempering is most justified in this case).

But at forging the fixing material the smiths did not especially carefully forge semi-finished wares, as it did not influence the working qualities of production. In metal garters the significant amount of slag and non-metal inclusions is observed. And it is possible to consider it to be also justified and rational in the technological process. First of all, it resulted in the economy of expenditures of labour, and secondly, the superfluous heating of a ware up to forging temperatures results in the loss of some amount of surface metal, which was unprofitable.

The wares functionally homogeneous to nails - cramps - were forged from non-homogeneously carbonised raw steel: (analyses NN: 1002, 1006, 1010, 1014), or from simple bloom iron (analyses NN 997 and 1013). The metal of semi-finished wares is also littered with slag and non-metal inclusions.

Door eyes from Hmelevskoe I settlement were forged either from simple bloom iron (analysis 964), or from batch semi-finished ware (analysis 1082). But the batch picture on the edge of a garter was formed, most likely, as a result of the utilization of metal. During the cooling of the forging in metal of the eye N 1082 the structure of sorbit (the result of soft tempering) was formed.

For household needs, obviously, the small hook - analysis N 1073 - was applied. According to the data of the analysis the hook was forged from simple bloom iron.

The rings and parts from chains by the data of the metallographic analysis were made either from non-homogeneously carbonised raw steel (analyses 970 and 1087), or from semi-finished wares batched from strips of non-homogeneously carbonised steel and bloom iron (analysis 963). It is quite possible, that batching of metal on this ware is the result of utilization of metal with the different contents of carbon.

For manufacturing details of a costume - buckles and their details (plates, frameworks and tips), pure steel unfinished wares were mainly used (items of wares NN: 988, 1003, 1006). Only ware N 971 was forged from usual bloom iron and fibulas, similar to buckles by functional purpose (analyses NN 978 and 1098), are forged from non-homogeneously carbonised raw steel.

The objects of arms - arrowheads, by results of metallographic analyses were forged from bloom iron (analysis 968), non-homogeneously carbonised raw steel (analysis N 990) and from pure steel semi-finished ware (analysis N 999).

For forging of keys to cylindrical locks the smiths used various raw material. Three keys are forged from bloom iron (analysis N 958), from non-homogeneously carbonised raw steel (analyses NN 975 and 982), and from pure steel semi-finished wares (analyses NN 984 and 955). On one key the forging from semi-finished ware welded from strips of bloom iron and steel can be seen (analysis N 1108).

Metallographic analysis of the fragment of a cylindrical lock has shown the presence of copper soldered seam of high quality between iron details.

Two metallographically investigated awls were forged from pure steel semi-finished wares (analyses NN: 1105 and 1101). It is characteristic that both items of awls have passed heat treatment - soft tempering, which, undoubtedly, was directed to the improvement of the working quality of tools. Awls tempered on sorbit were stronger and more blunt-proof.

The objects of uncertain purpose were forged either from simple bloom iron (analyses NN 988 and 1000), or from steel semi-finished ware welded from strips with various contents of carbon (analysis N 1083). Thus, the object N 1083 has undergone soft tempering, to what the structure of sorbit testifies.

Plough knife was forged from bloom iron (basic body of the tool), and a steel specially prepared plate was welded into a working part. The technological circuit of the object can be determined as welding of a steel plate into an iron basis. Traces of heat treatment on the ware are not seen.

The results of metallographic analyses of the smith wares from Hmelevskoe I settlement allow to make some preliminary conclusions about the level of development of the smith production of the Golden Horde population. However, the more objective conclusions are possible only after the research of different categories of quality wares.

APPENDIX 5.

A.S. ALESHINSKAYA, E.A. SPIRIDONOVA

Report on the results of palynological analysis on the Golden Horde settlements of Saratov area of the Saratov region (the right bank of Volga)

Settlement Hmelevskoe I, trench III, 2001

On settlement Hmelevskoe I from trench III 4 samples were studied by palynological method.

Samples were prepared for pollen analysis using separational method of V.P.Grichuk[1] with some modifications. Samples were boiled in 10% HCl, then in 10% KOH. Then they centrifuged in KI+KdI solution with specific gravity about 2.2-2.3. Obtained material placed in glycerin. The identification and counts were made at x400 magnification with Biolam microscope and difficult grains were additionally studied at x600-800 magnification.

The total pollen composition is presented as the sum of tree, herb pollen and spores. Tree pollen has been expressed as percentages of total tree pollen composition, herb pollen – of total herb pollen composition, spore – of total cryptogams composition.

All the investigated samples contained large quantities of pollen and spores, but the preservation of pollen grains were different. Except pollen and spores in all samples small remains of deciduous and coniferous wood were present. Small bits of char and crystals of ashes were often found. There were also small amounts of various plant tissue including whole anthers and fungi. This fact can be explained by the rotting of organic remains in the cultural layer. In samples 1-3 single algae *Pediastrum* was represented, what can testify to the short-term, probably spring-time, standing of poodles within the settlement.

Besides we should note the absence of the spruce pollen (*Picea*), the fir (*Abies*) pollen and the linden (*Tilia*) pollen of bad preservation, what can be connected with its secondary burial from more ancient layers.

Important is the fact that the pollen of wormwoods (*Artemisia*), aster family (Asteraceae), chicory family (Cichoriaceae), and grasses (Poaceae), including cereals, was sometimes found in large accumulations, which testified to the close transportation of these plants' pollen.

The pollen diagram has been divided into three palynological complexes (Fig.1). Then, after correlation of palynological data on two settlements these complexes were united into palynological zones (Table 1).

The I palynological complex (goosefoots, forbs of various composition, with grasses and wormwoods) is distinguished according to sample 1 (depth - 43 cm) in the layer of dark-brown clay (metal deposits).

In the composition of this complex the total herb pollen prevails (69%). The total tree pollen constitutes 28%, spores – 3 % (Fig.1, table 2).

Among the trees the pine pollen (*Pinus sylvestris*) dominates (69%). The birch pollen *(Betula sec.Albae)* constitutes about 10%, 7% - the alder pollen (*Alnus*). There are small amounts (3-5%) of spruce (*Picea*), linden (*Tilia*) and oak (*Quercus*) pollen.

In the group of herbs the pollen of goosefoot family (Chenopodiaceae) (39%) and forbs (28%) prevails. Among the forbs the majority belongs to the asters (Asteraceae) – 11% and the chicories (Cichoriaceae) pollen – 7%. There is a lot of the grasses pollen (Poaceae) – 16%, and the wormwoods (*Artemisia*) – 13%.

The cryptogamous plants are represented by green mosses (*Bryales*) only.

Taking into account the total composition of the palynological spectre, including the presence of the tree pollen, as well as the underdevelopment of pine pollen grains, we can conclude that the forming of this interval was connected with quite dry climatic conditions. At that time the xerophyte steppe communities prevailed, with a large quantity of the goosefoots, dry forbs, grasses and wormwoods. But we cannot exclude that the presence in the spectre of about 30% of the tree pollen may point on the local spreading of small groves of pine and deciduous species on the sites with the most beneficial geomorphological conditions with larger dampness of ground. This fact is partially confirmed by the finds of the alder pollen, which needs significant dampness of ground for growing.

It is also necessary to note the presence in this spectre of small amount of large size pollen grains of cereals (wheat or barley) and field weeds, such as *Polygonum* and *Fagopirum*. In connection with the above-said we can suggest that people came to this territory when the soil had been already formed. Its upper layer was ploughed, what was probably made after burning the stubble. This is testified by the large amount of

[1] Grichuk V.P. Metodika obrabotki osadochnykh porod, bednykh organicheskimi ostatkami, dlia tseley pyl'tsevogo analiza (Methods of prepearing of sedimental rocks, which poor ones with organic deposits for palynological analysis), in Problems of physical geography, 1940, T.VIII.

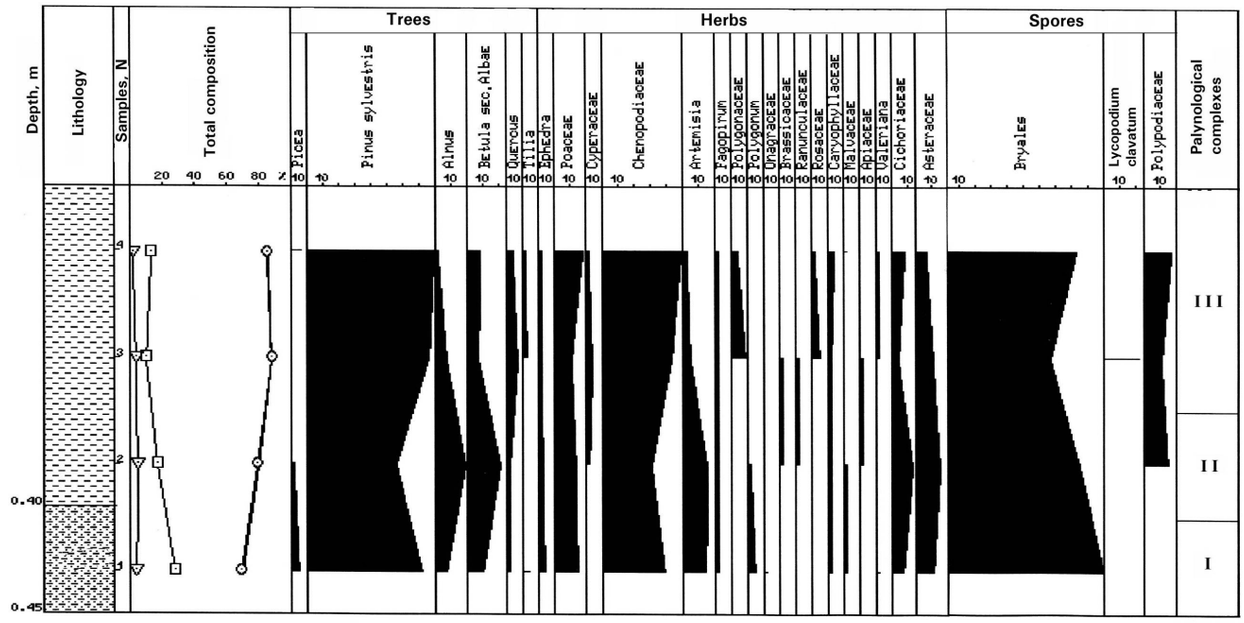

Fig. 1. Percentage pollen diagram of the section on the settlement Hmelevskoe I, trench III, 2001.

Table 1. The correlation of sections on the Golden Horde settlements of Saratov region according to palynological data

Palynological zones		Hmelevskoe I (palynological complexes)	Shiroky Buerak (palynological complexes)
Forbs, grasses, with goosefoots	6		IV
Goosefoots, grasses, with wormwoods and forbs; with alder and birch	5		III
Goosefoots, forbs, with grasses	4	III	
Forbs, goosefoots, with grasses and wormwoods	3	II	II
Forbs, grasses, wormwoods	2		I
Goosefoots, forbs of various composition, with grasses and wormwoods	1	I	

char and ashes crystal in the sample. This ploughing and the people's activity on the settlement broke the soil nature layer.

The II palynological complex (forbs, goosefoots, with grasses and wormwoods) is characterised according to sample 2 (depth - 38 cm) from the cultural layer.

As in the previous complex, the herb pollen prevails (79%). The tree pollen frequency is 16%, spores - 4%.

Trees are represented by the pine pollen (*Pinus sylvestris*) (56%), the birch (*Betula sec.Albae*) (21%), and the alder (*Alnus*) pollen (19%). There are small amounts of the spruce (*Picea*) and the oak (*Quercus*) pollen.

Among the herbs the forbs pollen (40%) and the goosefoots (Chenopodiaceae) (31%) pollen prevail. The grasses (Poaceae) pollen constitutes 14%, wormwoods (*Artemisia*) - 15%. The asters (Asteraceae) (15%) and the chicories (Cichoriaceae) (13%) pollen prevail among the forbs.

In the group of the cryptogams green mosses (*Bryales*) spores and polypody spores (Polypodiaceae) are represented.

The composition of this complex allows concluding that its formation took place in wetter conditions. This resulted in larger amount of various forbs, in the appearance of the sedges, and in large amount of alder among the trees species.

In this period the vegetation of the territory under consideration must be characterized as more complex, although as a whole the coverage by forests did not increase. The copses were probably preserved only in the places with the highest standing of subsoil waters, while the zone vegetation type was still steppes with various biocoenosis. The driest places were occupied by the goosefoots, the wormwoods, ephedra (*Ephedra*). More mesophilic groups included forbs of various composition, and grasses. The hygrophylity of certain parts of the territory was marked by the presence of the sedges, the crowfoots, and partly, carrot family. It is also important to note that beside wild grasses

cereals were represented. They had pollen grains of two main sizes – large, like in the zone I, and smaller, morphologically closer to millet. The presence of crops was accompanied by weeds, such as *Polygonum* and *Fagopirum* and small forms from cabbage family (Brassicaceae).

The III palynological complex (goosefoots, forbs with grasses) is described according to samples 3 and 4 from the cultural layer.

In the total composition the herb pollen prevails (86-88%). The tree pollen constitutes 9-12%, spores – 2-3%.

Among the trees pine pollen (*Pinus sylvestris*) dominates (76-79%). This complex is characterized by low representation of the birch (*Betula sec.Albae*), the alder (*Alnus*), the oak (*Quercus*) and the linden (*Tilia*) pollen. The spruce pollen (*Picea*) is found only in sample 3.

In the herb pollen composition the goosefoots (Chenopodiaceae) pollen prevails (43-49%). In comparison with the previous complex the quantity of the forbs pollen decreases, constituting 28% in sample 4. As in the previous zone among the forbs the asters (Asteraceae) pollen and the cichories pollen (Cichoriaceae) dominate. There is a lot of grass pollen (Poaceae) – 11-18%.

The cryptogamous plants are very few. They are represented by green mosses, ferns and club-mosses.

This period of Holocene is characterized by still narrower spread of forest groups, in fact without forest landscapes. The pine pollen grains are often underdeveloped. This especially refers to poor development of bladders, what often occurs in the dry conditions in spring. The steppes with dry forbs and grasses prevailed. In the driest places the role of goosefoots was significant, ephedra appeared. A part of goosefoots, as well as *Polygonum, Fagopirum*, and partly cabbage family (Brassicaceae) probably formed a complex of ruderal species. The character of the cereals was close to the previous stage.

Shiroky Buerak settlement, trench I, 2001.

On the settlement Shiroky Buerak 6 samples from trench I, 2001 were investigated by palynological method. Unlike samples from the trench on Hmelevskoe I settlement, these samples more often contained small pollen grains, crumbled and sometimes mineralised. This is most probably connected with unbeneficial conditions of microfossils burials. Alongside with pollen and spores there were a lot of small remains of coniferous and deciduous wood. Single plant remains of grass and fungi were represented. It is important to note the presence of ashes crystals, as early as in sample 1.

As a result of the analysis, four pollen complexes have been identified (Fig.2, table 1).

The I palynological complex (forbs, grasses, wormwoods) is distinguished according to sample 1 (depth - 93 cm) from the layer of the loam (natural deposits).

In the total composition the herb pollen prevails (83%). The tree pollen constitutes only 3%, spores – 14% (Fig.2, table 3).

Among the trees single pollen grains of pine (*Pinus sylvestris)* and birch (*Betula sec.Albae*) are recorded.

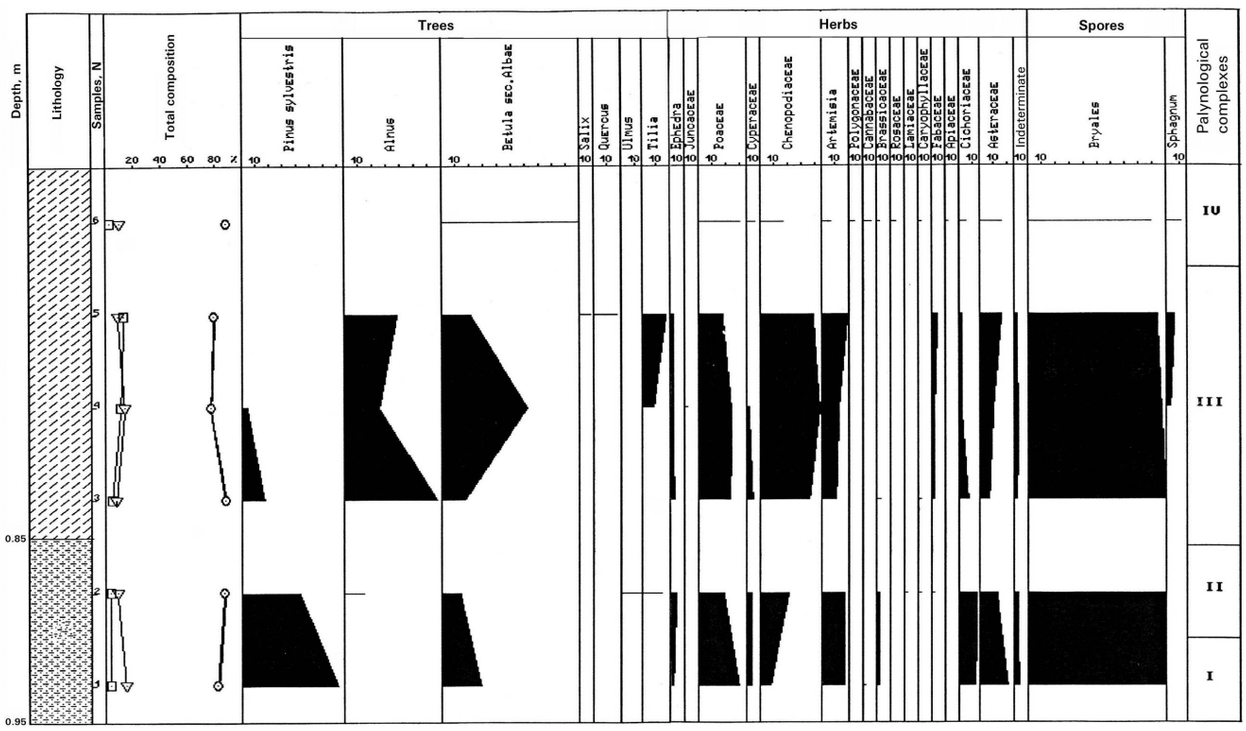

Fig. 2. Percentage pollen diagram of the section on the settlement Shiroky Buerak, trench I, 2001.

Table 2. The results of the palynological analysis Section Hmelevskoe I, trench III, 2001.

Systematic list TOTAL COMPOSITION	4 grains / %		3 grains / %		2 grains / %		1 grains / %	
Trees	52/	12.7	29/	9.0	48/	16.3	83/	27.8
Herbs	353/	85.9	286/	88.3	234/	79.3	207/	69.2
Spores	6/	1.5	9/	2.8	13/	4.4	9/	3.0
Trees								
Picea	3/	5.8	-		1/	2.1	4/	4.8
Pinus sylvestris	41/	78.8	22/	75.9	27/	56.3	60/	72.3
Alnus	1/	1.9	2/	6.9	9/	18.8	6/	7.2
Betula sec.Albae	4/	7.7	2/	6.9	10/	20.8	8/	9.6
Quercus	2/	3.8	2/	6.9	1/	2.1	2/	2.4
Tilia	1/	1.9	1/	3.4	-		3/	3.6
Herbs								
Ephedra	8/	2.3	4/	1.4	6/	2.6	8/	3.9
Poaceae	62/	17.6	32/	11.2	32/	13.7	32/	15.5
Cyperaceae	8/	2.3	11/	3.8	4/	1.7	-	
Chenopodiaceae	173/	49.0	123/	43.0	72/	30.8	81/	39.1
Artemisia	9/	2.5	15/	5.2	36/	15.4	28/	13.5
Fagopirum	5/	1.4	4/	1.4	2/	0.9	2/	1.0
Polygonaceae	14/	4.0	27/	9.4	-		-	
Polygonum	-		-		4/	1.7	10/	4.8
Onagraceae	-		-		-		2/	1.0
Brassicaceae	-		2/	0.7	2/	0.9	-	
Ranunculaceae	-		4/	1.4	5/	2.1	-	
Rosaceae	6/	1.7	13/	4.5	-		-	
Caryophyllaceae	13/	3.7	6/	2.1	2/	0.9	2/	1.0
Malvaceae	1/	0.3	-		2/	0.9	3/	1.4
Apiaceae	-		1/	0.3	1/	0.4	-	
Valeriana	1/	0.3	1/	0.3	-		2/	1.0
Cichoriaceae	27/	7.6	12/	4.2	30/	12.8	15/	7.2
Asteraceae	26/	7.4	31/	10.8	36/	15.4	22/	10.6
Spores								
Bryales	5/	83.3	6/	66.7	11/	84.6	9/	100.0
Lycopodium clavatum	-		2/	22.2	-		-	
Polypodiaceae	1/	16.7	1/	11.1	2/	15.4	-	

In the group of herbs the forbs pollen dominates, constituting almost 40%. The forbs are represented mainly by the asters pollen (Asteraceae) (21%) and chicories pollen (Cichoriaceae) (12%). Besides forbs there is a lot of grasses pollen (Poaceae) (30%) and wormwoods pollen (*Artemisia*) (17%). The pollen of goosefoots (Chenopodiaceae) exceeds 8%, the sedges pollen (Cyperaceae) - 4%. Single hemp pollen (Cannabaceae) is recorded. There are also very small forms of bad preservation, resembling the pollen of weeds from cabbage family (Brassicaceae). The pollen of cereals is present in very small amount.

Among the cryptogamous plants only spores of green mosses (*Bryales*) are found.

The composition of this complex factually characterizes the domination of forest-free landscapes where steppes with forbs, grasses and wormwoods prevailed.

The II palynological complex (forbs, goosefoots, with grasses and wormwoods) is characterized according to sample 2 (depth - 88 cm) from the layer of the natural loam. It is important to note the presence of whole anthers, other plant remains and a large quantity of ashes crystals.

In the total composition the herb pollen prevails (88%). Total tree pollen does not exceed 3% of the total pollen sum, spores - 8%.

The tree pollen composition is more varied than in the previous zone. It includes the pine pollen (*Pinus sylvestris*), the alder (*Alnus*), the birch (*Betula sec.Albae*), the elm (*Ulmus*) and the linden (*Tilia*) pollen. Among the pine pollen there are forms with poorly developed bladders, what is most often connected with rather high spring temperatures in the period of blossoming.

In the group of herb plants the forbs pollen still dominates (35%). Among them the asters pollen (Asteraceae) and the chicories (Cichoriaceae) pollen are found very often (13% each). There is still a lot of the wormwoods pollen (*Artemisia*) (17%). In comparison with the previous complex the amount

Table 3. The results of the palynological analysis Section Shiroky Buerak, trench I, 2001.

Systematic list TOTAL COMPOSITION	6 grains/ %	5 grains/ %	4 grains/ %	3 grains/ %	2 grains/ %	1 grains/ %
Trees	4/ 2.0	24/ 12.1	24/ 9.8	24/ 4.1	7/ 3.4	7/ 3.1
Herbs	179/ 88.6	158/ 79.8	188/ 77.0	132/ 89.2	179/ 88.2	185/ 83.0
Spores	19/ 9.4	16/ 8.1	32/ 13.1	10/ 6.8	17/ 8.4	31/ 13.9
Trees						
Pinus sylvestris	-	-	1/ 4.2	1/ 16.7	3/ 42.9	5/ 71.4
Alnus	-	9/ 37.5	6/ 25.0	4/ 66.7	1/ 14.3	-
Betula sec.Albae	4/100.0	5/ 20.8	15/ 62.5	1/ 16.7	1/ 14.3	2/ 28.6
Salix	-	2/ 8.3	-	-	-	-
Quercus	-	4/ 16.7	-	-	-	-
Ulmus	-	-	-	-	1/ 14.3	-
Tilia	-	4/ 16.7	2/ 8.3	-	1/ 14.3	-
Herbs						
Ephedra	-	1/ 0.6	2/ 1.1	4/ 3.0	8/ 4.5	3/ 1.6
Juncaceae	-	-	2/ 1.1	-	-	-
Poaceae	53/ 29.6	29/ 18.4	46/ 24.5	30/ 22.7	34/ 19.0	55/ 29.7
Cyperaceae	10/ 5.6	-	2/ 1.1	6/ 4.5	8/ 4.5	8/ 4.3
Chenopodiaceae	30/ 16.8	61/ 38.6	82/ 43.6	47/ 35.6	37/ 20.7	15/ 8.1
Artemisia	13/ 7.3	30/ 19.0	24/ 12.8	15/ 11.4	30/ 16.8	32/ 17.3
Polygonaceae	8/ 4.5	-	-	-	-	-
Cannabaceae	10/ 5.6	-	-	-	-	1/ 0.5
Brassicaceae	2/ 1.1	-	-	4/ 3.0	1/ 0.6	2/ 1.1
Rosaceae	8/ 4.5	-	-	-	-	-
Lamiaceae	-	-	-	-	3/ 1.7	-
Caryophyllaceae	3/ 1.7	-	-	2/ 1.5	3/ 1.7	-
Fabaceae	-	6/ 3.8	3/ 1.6	3/ 2.3	2/ 1.1	-
Apiaceae	4/ 2.2	-	-	-	-	-
Cichoriaceae	9/ 5.0	3/ 1.9	4/ 2.1	9/ 6.8	24/ 13.4	22/ 11.9
Asteraceae	29/ 16.2	26/ 16.5	18/ 9.6	9/ 6.8	24/ 13.4	39/ 21.1
Undetermined	-	2/ 1.3	5/ 2.7	3/ 2.3	5/ 2.8	8/ 4.3
Spores						
Bryales	17/89.5	15/ 93.8	31/ 96.9	10/100.0	17/100.0	31/100.0
Sphagnum	2/10.5	1/ 6.3	1/ 3.1	-	-	-

of grasses pollen (Poaceae) slightly decreases (to 19%) and the content of the goosefoots pollen (Chenopodiaceae) increases to 21%. The pollen of ephedra (*Ephedra*) and small forms of weeds from cabbage family (Brassicacece) are represented.

Only spores of green mosses (*Bryales*) were found among the cryptogams.

This complex also corresponds to the steppe phase of vegetation development. There were no copses of wood near the settlement. But in comparison with the previous complex in this period there were more beneficial conditions for the appearance of small forests with deciduous species in the valleys of big and small rivers. They could include elm, linden and even the moisture-loving black alder. All this might be a characteristic of a wetter climate in comparison with the previous period.

By the composition and quantitative characteristics of the families and genera this complex is most of all similar to the complex II of Hmelevskoe I settlement (Table 1).

The III palinological (goosefoots, grasses, with wormwoods and forbs; with alder and birch) is described according to samples 3-5 (depth -83, -78, -73 cm) from the cultural layer. Here, as in samples of other complexes, there are a lot of organic remains, small pieces of coniferous and deciduous wood, ashes crystals and fungi.

In the total composition the herb pollen prevails (77-89%). There is still little amount of the tree pollen, but in the sample 5 its percentage increases up to 12%. Spores constitute from 7 to 13%.

The total tree pollen composition differs from all complexes of Shiroky Buerak settlement. Here in the sample 3 the alder pollen (*Alnus*), and in the sample 4 – the birch pollen (*Betula sec.Albae*) prevail, in the sample 5 there is a lot of alder pollen (*Alnus*), the birch pollen (*Betula sec.Albae*) and pollen of deciduous species - oak (*Quercus)* and linden (*Tilia*).

Such the tree pollen composition is most often conditioned not by the zone type of vegetation but the local conditions of

the geographical position of the settlement. Most probably, the role of small forests increased during the formation of sediments of the given segment of the cultural layer.

The herb pollen composition also changed in comparison with the previous zone. Here the leading position belongs to the goosefoots pollen (Chenopodiaceae), reaching 36-44%. The content of the grasses pollen (Poaceae) increases up to 18-25%, at the same time the percentage of the forbs pollen decreases to 16-24%. There is still a lot of wormwoods pollen (*Artemisia*) (11-19%).

This sequence of dominating of the leading families seems to contradict to the idea of wetter conditions because of the significant role of the goosefoots. However it should be noted that in this complex there are the highest representation of the cereal pollen grains of two sizes, among which small forms prevail. It is most probable that some part of goosefoots pollen is the weeds, which are connected with the ploughed fields.

In the cryptogamous plants group besides green mosses (*Bryales*) the spores of bog-mosses (*Sphagnum)* are found.

As a whole, all the peculiarities of spectres confirm that the climate became wetter in comparison with the previous stage. However the vegetation cover consisted of steppe communities, and only in the river valleys there could be small copses of alders, birches and deciduous species. The steppes were formed of grasses and forbs communities with wormwoods and ephedra. However it was the period of the maximum cultivation of ploughed land. This is confirmed not only by the large quantity of the cereals in the spectres, but also by the presence of field weeds. The character of the species composition of weeds on the studied settlements appeared to be not identical. Here it is less diverse that on Hmelevskoe I settlement.

The IV palynological complex (forbs, grasses, with goosefoots) is distinguished according to sample 6 (depth - 68 cm) from the cultural layer also, but its composition differs sharply from the previous one. As a whole there are a lot of organic remains. The level of pollen preservation is various. There are a lot of small remains of coniferous and deciduous wood. There are quite a lot of ashes and fungi. The goosefoots, wormwoods and asters pollen is sometimes found in large accumulations, what speaks of its close air transportation.

The herb pollen still dominates (89%), the tree pollen constitute 2%, spores - 9%.

The tree pollen composition is represented only by single pollen grains of the birch (*Betula sec.Albae*), while other forms are absent.

The increase to 41% of the forbs pollen quantity is characteristic for the herb pollen composition. The composition of forbs is rather rich. Besides the dominating aster pollen (Asteraceae) (16%) they are represented by the chicories (Cichoriaceae), roses (Rosaceae), hemps (Cannabaceae), jointweeds (Polygonaceae). The amount of grasses pollen increases to 29% (*Poaceae*). The goosefoots pollen (Chenopodiaceae) constitutes 17%, the pollen of wormwoods - 7% (*Artemisia*). Cereal pollen of two sizes is present in the spectre, but they are significantly more seldom than before.

Among the cryptogams there are green mosses (*Bryales*) and bog-mosses (*Sphagnum).*

The vegetation was still characterized by the dominance of steppe communities, but at this stage the role of forbs increased. It is most probably connected with the decrease of anthropogenic influence in the form of land ploughing on the natural vegetation. It should also be noted that such a sharp change of spectre composition is conditioned by a break in fallout accumulation.

According to the palynological analysis carried out on two settlements, the common features of changes in climate, vegetation and role of man in the cultivation of the investigated territory were pointed out. The presence of samples from different sections of trenches would have given material for a more detailed picture of the environmental changes in the XIIIth – XIVth centuries. Anyway, some peculiarities should be marked:

1. In spite of the existence of similar conditions on the settlements, it is hard to consider them synchronic. Our ideas on the stratification of cultural layers are given in Table 1.

2. The natural deposits, which were represented in sections, are most probably connected with the earlier existing buried soils. They could be involved in the composition of cultural layers as a result of ploughing or some other agricultural activities.

3. The cereals are present in all investigated samples, but their quantity was changing. The cultural layer on the Shiroky Buerak settlement (complex III) was most rich in them. According to the pollen morphology, there were mostly millet, less wheat and barley. This is learnt from the shape and size of pollen grains, though because of their bad condition the differences are often hard to see.

4. Concerning the climate, in spite of the poor dynamics of the zone biocoenoses, we can trace a certain trend of gradual increase of wetness with the maximum in complex III of Shiroky Buerak settlement. The increase of dampness of the climate is marked by the scientists taking into account raising of the level of lakes and rivers. According to G.I.Rychagov[2] in the XIVth century a peak of New-Caspian transgression took place, when the level of the Caspian Sea was 4-4.5 m higher than now. There are similar observations on the coast of the Aral Sea. Proceeding from such assumptions, the investigated layers represent the very end of the XIIIth century and the larger part of the XIVth century.

[2] Rychagov G.I. Pleystotsenovaya istoriya Kaspiyskogo morya (The Pleistocene History of the Caspian Sea), Moscow: Izd-vo MGU, 1997.

The assumptions about the climate and the age of cultural layers could be made more precise having more factual material selected on the settlements in different parts of trenches.

APPENDIX 6.

E.YU. LEBEDEVA

On agriculture in the Volga steppes in Mongol time

We can judge about the medieval agriculture of the Mongol invasion epoch chiefly on the basis of grain materials from the ancient Russian towns[1]. There is also some information on the composition of the cultivated plants in the centres of the Volga Bulgaria of pre-Mongol as well as the Golden Horde period.[2] However, first of all, all these data refer to the forest and steppe-forest regions, and secondly, they are mainly based on the investigations of grain accumulations, which do not allow to trace the dynamics of the development and change of the crops composition during a prolonged period of time. Flotation of the cultural layer, unfortunately, is not widely used in archaeological excavations in Russia. That is why the works on investigation (including the palaeobotanical one) of the cultural layer of the steppe zone monuments of the Golden Horde period are of utmost importance.

During the field archaeological investigations in the Saratov region in 2001 the author of the excavations collected samples of cultural layer and made their further flotation. The volume of each sample was standard and constituted about 10 litres (1 bucket). On Shiroky Buerak settlement 20 samples were taken, on Hmelevskoe I – 6 samples. All of them were transferred to the laboratory of scientific methods of the Institute of Archaeology of Russian Academy of Sciences for palaeobotanical analysis.

On Shiroky Buerak settlement out of 20 samples only 14 appeared to contain palaeobotanical macroremains. Moreover, all samples from pits contained seeds of crop plants, whereas in the cultural layer they were found only in two samples in a very limited quantity and in fragmented preservation (Table 1, N° an. 782 and 783). One more sample from cultural layer (an. N° 784) contained carbonised seeds only of wild grass.

The largest quantity of samples was selected in different layers in pit 1. All of them contained remains of crop plants. This fact, however, does not testify to the usage of this pit as a granary. On the contrary, the fact that the majority of remains are concentrated not in the lower, bottom part of the pit, but very evenly distributed throughout the thickness of the cultural layers, with the maximum concentration in its central part, speaks of its rubbish filling. Moreover, the piling of the rubbish remains took place not simultaneously, but repeatedly. This is confirmed by the finds of fish scales in samples No 790 and 791, which probably constituted one of the layers in this pit. In case of momentary filling of the construction the scale would have been mixed and could have been found in all layers.

On settlement **Hmelevskoe I** out of 6 samples selected from the cultural layer, only one appeared to be empty. Although - the concentration of grains in these samples was low (3-5 grains per sample), the richness of palaeobotanical finds in the cultural layer of this monument should be considered higher that on the settlement Shiroky Buerak. It is notable that all these materials come from the depth of 20-40 cm. However, we should be cautious here and note that the most of grains in all samples are not completely carbonised (i.e. charred) and are well preserved. So, if the part of the settlement from which the samples were taken is overlapped by arable field, we can not exclude the possibility that these grains refer to modern agriculture. After the widely spread procedure of burning the stubble and further ploughing, the burnt fallen grains can be unlimitedly preserved in the ground (in our case – in the cultural layer). To prove the ancient origin of the finds it will be necessary to compare the obtained materials with the finds from the constructions of this settlement (pits, buildings, etc.). According to the data of the authors of excavations, in one of the pits, investigated in 1999, grains of millet were found.

As a result of the laboratory microscopic investigations a palaeobotanical collection was obtained. It contains 385 macroremains (Table 1), out of which 114 (29.6%) are carbonised weed and wild grass seeds[3] and 110 (28.6%) are unidentified fragments of crop cereals. The fraction of identified grains of crop plants is 41.6%, which constitutes the base for conclusions about the composition of cultivated plants. It is symptomatic that traces of thrashing of bread cereals are practically absent – only one rachis fragment of barley was found on Hmelevskoe I settlement.

As the selections from cultural layer of each of the settlement

[1] Kir'yanova N.A. Sel'skokhozyaystvennye kul'tury i sistemy zemledeliya v lesnoy zone Rusi XI-XV vv. (Agricultural plants and systems of agriculture in the forest zone of Rus of the XIth - XVth centuries), Moscow, 1992.

[2] Kir'yanov A.V. K voprosu o zemledelii volzhskikh bolgar (On the problem of agriculture of the Volga Bulgarians), in KSIIMK, 1955, Vyp.57, P.3-16; Kir'yanov A.V. K voprosu o rannebolgarskom zemledelii (On the problem of early Volga Bulgarian agriculture), in MIA, 1958, N 61, P.282-291; Tuganaev V.V. Sostav i kharakteristika kul'turnykh i sornykh rasteny Bilyarskikh poley (The composition and characteristics of crop and weed plants of Bilyar fields), in Issledovaniya Velikogo goroda, Moscow,1976, P.240-245; Frolova V.I. Novye materialy k kharakteristike kul'turnykh i sornykh rasteny bulgarskikh poley v okrestnosti Bilyara (New materials to the characteristics of crop and weed plants of Bulgar fields in the region of Bilyar), in Novoe v arkheologii Povolzh'ya (arkheologicheskoe izuchenie tsentra Bilyarskogo gorodishcha), 1979, P.139-141.

[3] As a rule, in samples obtained by flotation of the cultural layer, a significant amount of such seeds is found (40-50% and even more). Only some of them are weed plants from arable field, while very often they just reflect the spectre of grasses which grew on the settlement or around it. Often the large amount of such seeds can be interpreted as a result of burning of manure as a fuel in forest-free regions.

Table 1. Species composition of palaeobotanical samples from Shiroky Buerak and Hmelevskoe I.

Taxon **N° an.**	***Shiroky Buerak***													
	782	**783**	**784**	**785**	**786**	**787**	**968**	**788**	**789**	**790**	**791**	**792**	**793**	**794**
	Culture level			pit 2	pit 1									
Crop plants														
Triticum aestivum				2	1	1	1	3	4	6	3		1	
Triticum spec. fragm.					1									
Hordeum vulgare, vulgare				1	3			2		2			2	
cf.Hordeum vulgare, nudum											3	1		
Hordeum spec.								2					2	
Hordeum, rachis segment														
Panicum miliaceum	1	1		12	5	6		1	2	6	5	1	3	
Setaria italica				1			1	2	6	6	12	1	12	1
Secale cereale				1		4	1	2	2	5	2	1	1	
Cerealia fragm. undet.	2	1		6	4	11	3	24	8	22	18		10	
Weeds and wild plants														
Setaria viridis									1		11		1	
Setaria spec.				1		2		6		3			1	
Avena spec.				1	2			1		1		1		
Poaceae	1					1		1	2	2				
Fabaceae								1						
Brassicaceae				1										
Galium spec.					8			2						
Polygonum aviculare													1	
Polygonum convolvulus										1	1	1		
Rumex spec.									1					
Chenopodium album	1		1			1	1	1						
Chenopodiaceae	1			9	7			4	4	5	4		1	
Ranunculus arvensis			1											
undetermined	1			4				4		3	1			1
Σ	**7**	**2**	**2**	**39**	**31**	**26**	**7**	**56**	**30**	**62**	**60**	**6**	**35**	**2**

Taxon **N° an.**	Hmelevskoe I					Σ
	795	**796**	**797**	**798**	**799**	
	Culture level					
Crop plants						
Triticum aestivum						**22**
Triticum spec. fragm.				1		**2**
Hordeum vulgare, vulgare						**10**
cf.Hordeum vulgare, nudum						**4**
Hordeum spec.						**4**
Hordeum, rachis segment	1					**1**
Panicum miliaceum	3	2	3	2	3	**56**
Setaria italica						**42**
Secale cereale		1				**20**
Cerealia fragm. undet.	1					**110**
Weeds and wild plants						
Setaria viridis						**13**
Setaria spec.						**13**
Avena spec.						**6**
Poaceae						**7**
Fabaceae						**1**
Brassicaceae						**1**
Galium spec.						**10**
Polygonum aviculare						**1**
Polygonum convolvulus						**3**
Rumex spec.						**1**
Chenopodium album						**5**
Chenopodiaceae			1	1		**37**
Ranunculus arvensis						**1**
undetermined				1		**15**
Σ	**5**	**3**	**4**	**5**	**3**	**385**

are not trustworthy because of the small number of finds, and the main mass of data (81%) is obtained from a single pit (pit 1 on Shiroky Buerak settlement), it would be correct to speak of the total regional (or local) palaeobotanical complex on the materials of the two investigated monuments together. The summarised selection of the crop plants grains is representative enough (160 grains) and we cannot exclude that this spectre will be determining for the whole region of the Golden Horde time.

The characteristic feature of the palaeobotanical complex is the absolute dominating of millet: its share in the crop plants collection is 61.3% (Table 1). Millet is represented by two species – broomcorn (*Panicum miliaceum*) and Italian (*Setaria italica*). It should be noted that in Hmelevskoe I only broomcorn millet was found, while on the Shiroky Buerak settlement – both species. Other bread cereals are represented in the collection in relatively similar proportions: bread wheat (*Triticum aestivum*) – 15%, rye (*Secale cereale*) – 12.4%, barley (*Hordeum vulgare*) – 11.3%. Because of bad preservation and fragmentarily state of the finds it is hard to define reliably if one or two species of barley are present in our selection. Undoubtedly, all grains of barley belong to six-row forms, but it is hard to say if they belong only to hulled forms (*Hordeum vulgare*, *vulgare*), like all reliably defined grains, or partially to naked forms. At least four grains from samples No 791 and 792 are conditionally considered to be naked six-row barley (*Hordeum vulgare, nudum*). In the absence of transverse wrinkling characteristic for this species, the main indication for verification of these grains was a narrow furrow, not widening to the top, the absence of traces of glumes and lemmas and of the numerous facets which are preserved even on glumes-free grains of hulled forms. All the found oat grains (they are 6) are considered to wild forms, though we cannot exclude that two grains could be common white oat *Avena sativa*.

In conclusion we would like to note that as a whole the composition of agricultural plants identified on the materials of settlements Shiroky Buerak and Hmelevskoe I is traditional for the Middle Ages. However, the hierarchy of crop plants in this spectre does not seem usual. For example, the proportion of millet seems unusually high, while the percentage of rye – the main crop plant of Old Rus - is relatively low. But, as the flotations of the recent years show, millet was widely cultivated not only in the steppe and forest-steppe, but also in the forest zones in the Early Iron Age and in the Middle Ages.

Having no palaeobotanical information from the synchronic steppe monuments, it is most logical to compare the obtained data with the materials from Bulgarian settlements. Here most often bread wheat, millet, emmer, hulled six-row barley and naked six-row barley are found; also there is oat, rye, flax, hemp, leguminous plants (field pea, vetch, lentil) and some fruit species (apples, cherries), also raspberry was found. It should be reminded that all these palaeobotanical materials come from the grain accumulations. The works on the flotation of the cultural layer were carried out only on the Podgory settlement in Samara region, where the samples were selected in the layers of Imen'kovo and Volga Bulgarian cultures. In the obtained collection out of 40 grains and seeds of crop plants the broomcorn millet is also leading. It constitutes more than half of the finds. There are also bread wheat grains, and single finds of emmer, peas and flax.

In comparison with the above-mentioned finds the assortment of cultivated plants from settlements Shiroky Buerak and Hmelevskoe I looks somewhat poorer, mainly due to the absence of leguminous plants and flax. An important factor for this is obviously the climatic conditions of dry Volga steppes. Millet is the most adaptable to such conditions. It is a typical xerophyte, well adapted for heat and droughts. N.I.Vavilov wrote that no other crop plant in the South-East of Russia had such a complete variety of subspecies and races as millet: out of 50 subspecies up to 40 were known there (!!!). "It is not a rare thing to find up to 20 subspecies in one field ", – he wrote in 1922[4].

The materials introduced here are the first step in the study of the history of agriculture of the population included in the Golden Horde. The historical situation of that time does not allow to apply the common ideas about the character of the medieval agriculture to this region. That is why on the basis of the obtained information we can just formulate the questions on the typicality of the reconstructed species composition of crop plants, on the population groups engaged in agriculture and their interrelations with the nomadic Mongol tribes.

Only intensive continuation of investigations and further increase of palaeobotanical collections from the steppe monuments of the Volga region can give us answer to these questions.

[4] Vavilov N.I. Polevye kul'tury Yugo-Vostoka (Field species of the South-East), in Izbrannye trudy, T.II, P.248-249.

APPENDIX 7.

I.R. GAZIMZYANOV

Craniological characteristics of skulls from the Hmelevsky II and III burial grounds

For the craniological analysis we were provided with the skulls from burials of the Hmelevsky necropolises (II, III). The burial ritual is Muslim. The time of functioning of the necropolises dates back to the Golden Horde period. The series consisted of three skulls of different preservation. Two skulls refer to the II Hmelevsky burial ground, one – to the III Hmelevsky burial ground. Taking into account the insufficiency of the series, we give below the craniological characteristic of each skull separately. The measurements are presented in a table.

II Hmelevsky necropolis

Burial 1. Male's skull, age – 30-35 years. The brain part of pentaganoid shape (from above) had large sizes of length, width and height diameters; mesocran by the brain index. The muscle relief in the area of eyebrows and nape is protruded. The forehead is broad, medium-inclined. The width and height parameters of the face part are characterized by large sizes. At the level of orbits and cheek-bones a small flatness of the face can be observed. The bridge of nose is moderately profiled, the angle of nose bones protruding is medium. In the vertical projection some prognatism of the facial part of the skull is revealed. The depth of the fang hole is big, the lower edge of the pear-shape aperture is sharpened. In spite of the large size of the face and the small vertical profiling, the skull, as a whole, has a Europeoid look.

Burial 2. Male's skull, judging by the degree of obliteration of the skull junctions and the rubbing off of the upper molars the age of the person is defined as 45-50 years. By the absolute measures the brain part of pentaganoid shape (from above) is characterized by medium sizes of the basic diameters. By the index the skull refers to mesocranian shapes. The microrelief is moderately expressed. The facial part is of medium width, low height (however, the height of the face is defined approximately because of the destroyed alveolar edge of the upper jaw). The orbits are broad and low – hamekonhnal. The height and width of the nose are small, by the index – mesorine. The face profiling in the horizontal projection is

Table. The basic craniological parameters of the skulls from the Hmelevsky burial grounds of the XIIIth – XIVth centuries.

Parameters (by Martin)	II Hmelevsky burial ground		III Hmelevsky burial ground
	Burial 1	Burial 2	Burial 1
Sex	male	male	male?
Age (years)	30-35	45-50	40-50
1. Length diameter	188.0	179.0	173.0
8. Width diameter	145.0	140.0	146.0
8:1. Skull index	77.1	78.2	84.4
17. Height diameter	141.0	134.0	-
9. Minimal width of the forehead	102.0	93.0	92.5
45. Hearing diameter	141.0	135.0	120.0
48. Upper height of the face	79.0	62.0?	76.0
55. Height of the nose	57.0	46.0	53.0
54. Width of the nose	25.0	23.0	21.0
51. Width of the orbit	45.0	43.0	39.0
52. Height of the orbit	36.0	28.5	33.5?
77. Nasomolar angle	144.5	137.6	137.0
Zigomaxillar angle	129.8	129.3	-
Simotic height	4.5	3.6	6.2
Donkrat height	12.3	12.2	-
The depth of the fang hole (mm)	7.8	6.1	4.5
32. The angle of the forehead profile	80^0	84^0	-
75 (1). The angle of the nose protruding	27^0	47^0	34^0
The lower edge of the pear-shape aperture	Antr.	Antr.	Antr.

sharp, the angle of the nose protruding is big. In the vertical projection – ortognate. The fang hole is deep, the lower part of the pear-shape aperture is sharpened. The skull belongs to the Europeoid type.

III Hmelevsky Necropolis

Burial 1. The skull of the medium preservation, partly restored. The skull basis bones are missing. The sex definition caused certain difficulties. With a certain degree of doubt the skull is defined as a male's one. The age is about 40-50 years. The skull is brahicranian, of a rhombus-like shape with a medium-expressed relief. The forehead bone is narrow with a medium incline (defined visually). The facial part is rather narrow (for a male), but high, lept. The nose is narrow and high, the angle of protruding is big, the lower edge of the pear-shape aperture is sharpened. The orbits are characterized by medium sizes of width and height. The flatness of the face at the level of orbits is weakly expressed. Some prognatism of the face in its middle part (in the vertical projection) is revealed. The depth of the fang hole is medium. The anthropological type is Europeoid with a small Mongoloid mixture.

Thus, the population buried in the II and III Hmelevsky necropolises is preliminarily characterized as Europeoid type. The more precise estimation of the physical appearance of the given group of the population is not possible before obtaining the new anthropologic materials.

Illustrations

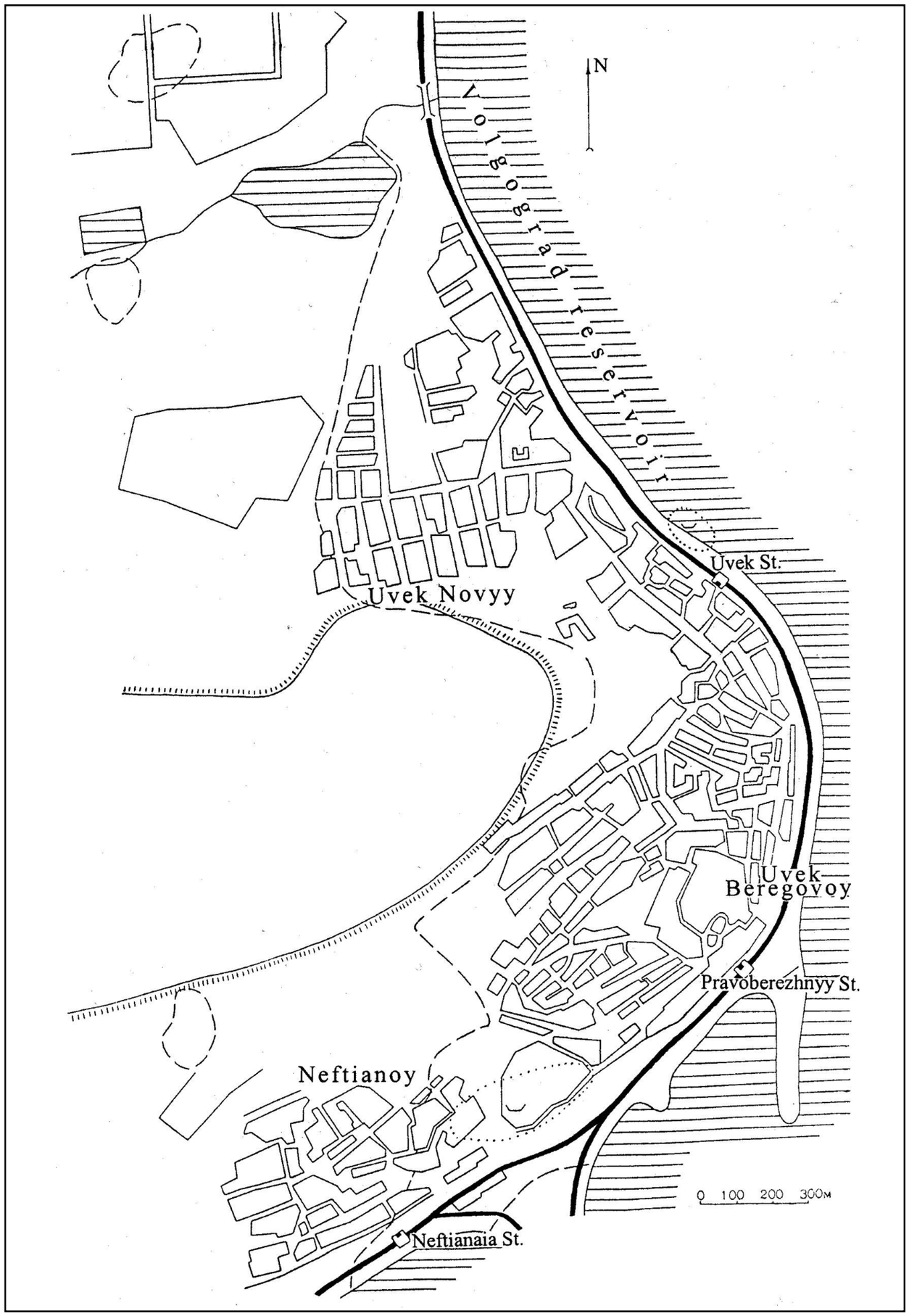

Fig.1. The plan of the Uvek site (the borders of a monument are shown by a dotted line).

Fig.2. Photo of the excavations of S.S.Krasnodubrovsky and L.L.Golitsyn at Uvek site in 1891 (Photo archives of IIMK, No Q400/1-3).

Fig.3. Photo of the excavations of S.S.Krasnodubrovsky and L.L.Golitsyn at Uvek site in 1891 (Photo archives of IIMK, No Q400/1-3).

Fig.4. Photo of the excavations of S.S.Krasnodubrovsky and L.L.Golitsyn at Uvek site in 1891
(Photo archives of IIMK, No Q400/1-3).

Fig.5. Photo of the finds of 1893 from Uvek site, passed from Emperor's Archaeological commission to the Society of Archaeology, History and Ethnography at Kazan University (Photo archives of IIMK, No Q458/25).

Fig.6. Photo of the finds of F.V.Dukhovnikov of 1893 from Uvek site
(Photo archives of IIMK, No Q377/7,9).

Fig.7. Photo of the finds of F.V.Dukhovnikov of 1893 from Uvek site
(Photo archives of IIMK, No Q377/7,9).

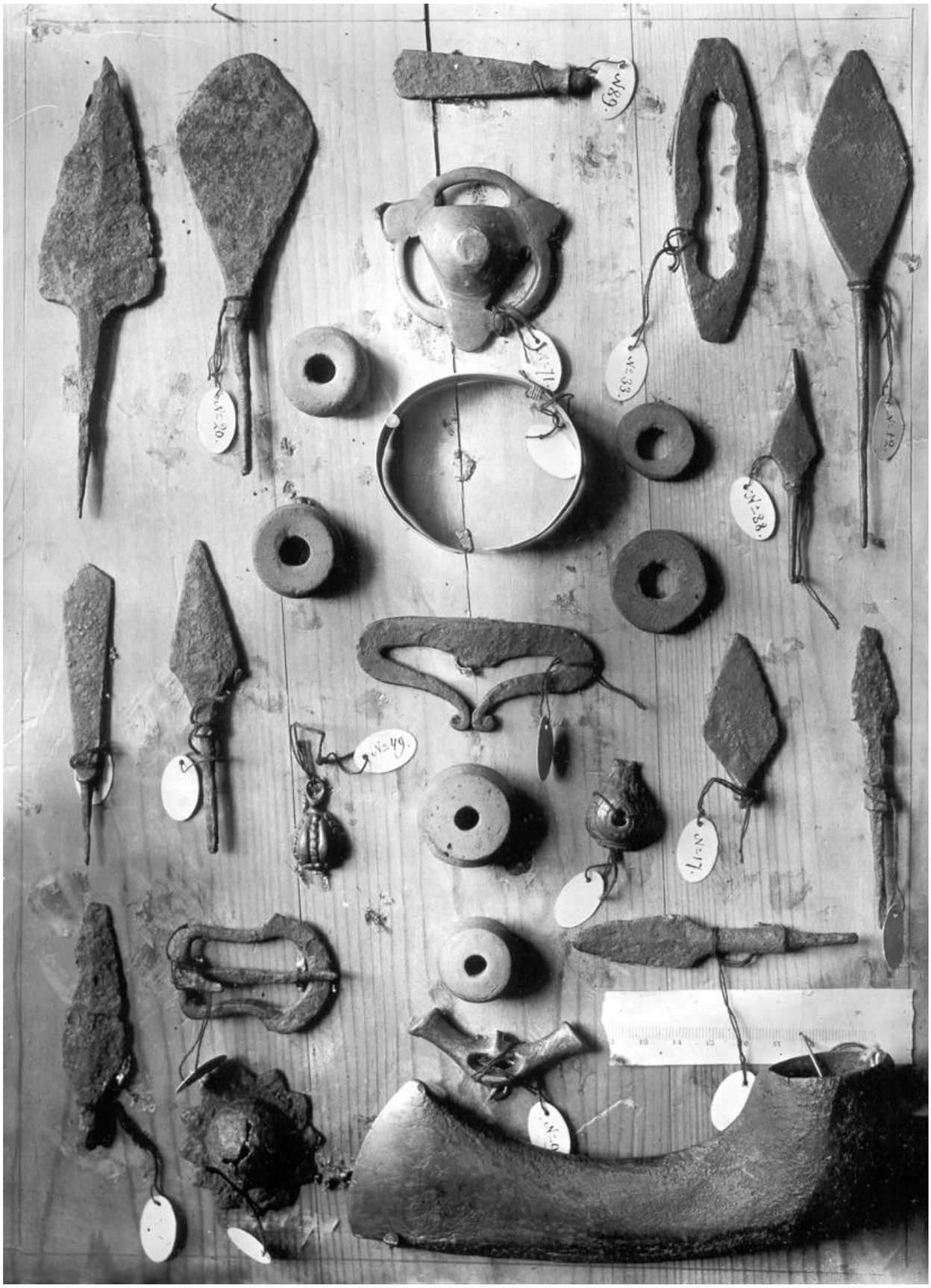

Fig.8. Photo of the finds of F.V.Dukhovnikov of 1893 from Uvek site
(Photo archives of IIMK, No IV 1649).

Fig.9. Photo of the finds of F.V.Dukhovnikov of 1893 from Uvek site
(Photo archives of IIMK, No Q377/1).

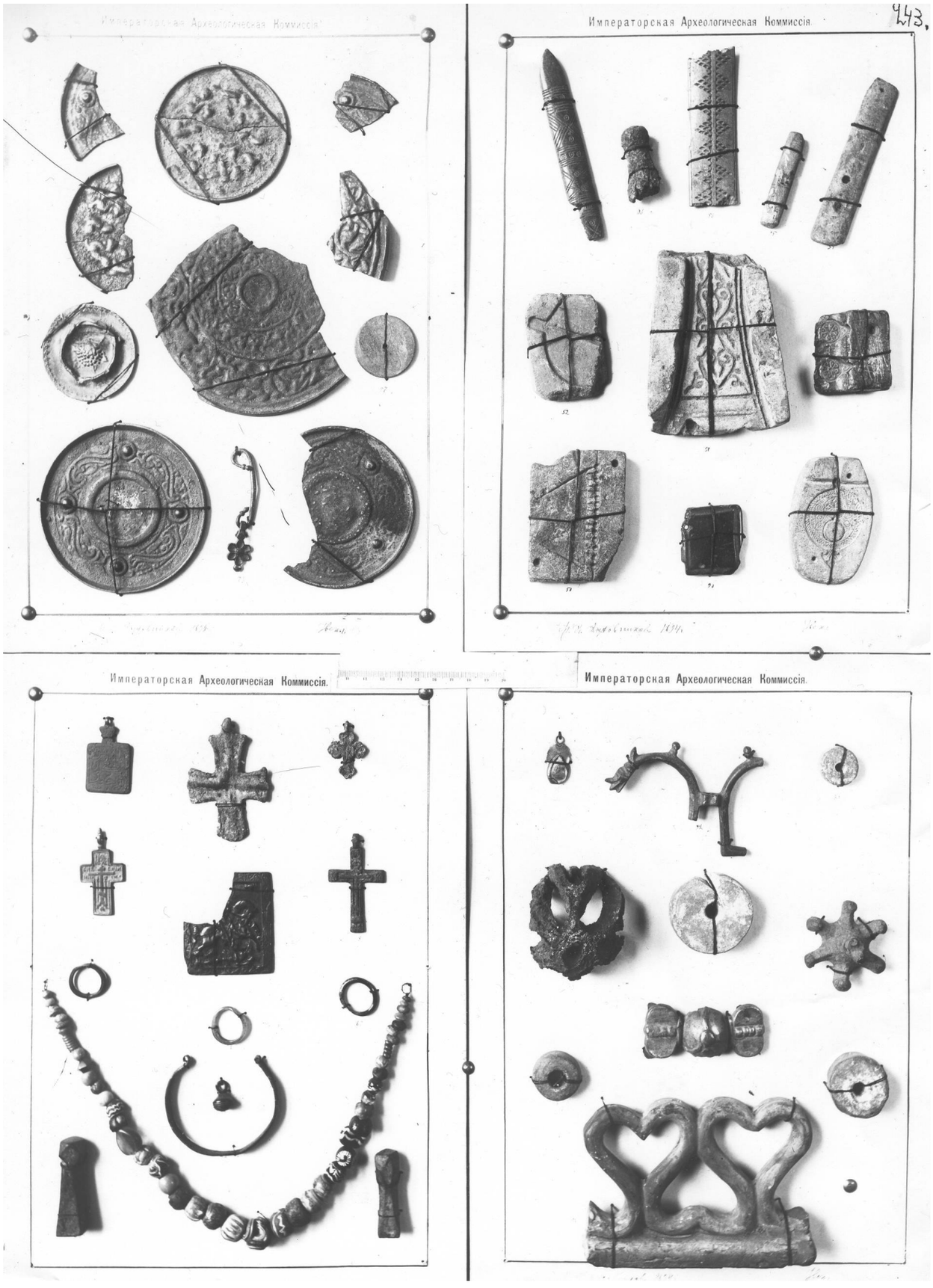

Fig.10. Photo of the finds of F.V.Dukhovnikov of 1893 from Uvek site, passed from Emperor's Archaeological commission to the Historical Museum (Moscow) in 1894 (Photo archives of IIMK, No IV 867).

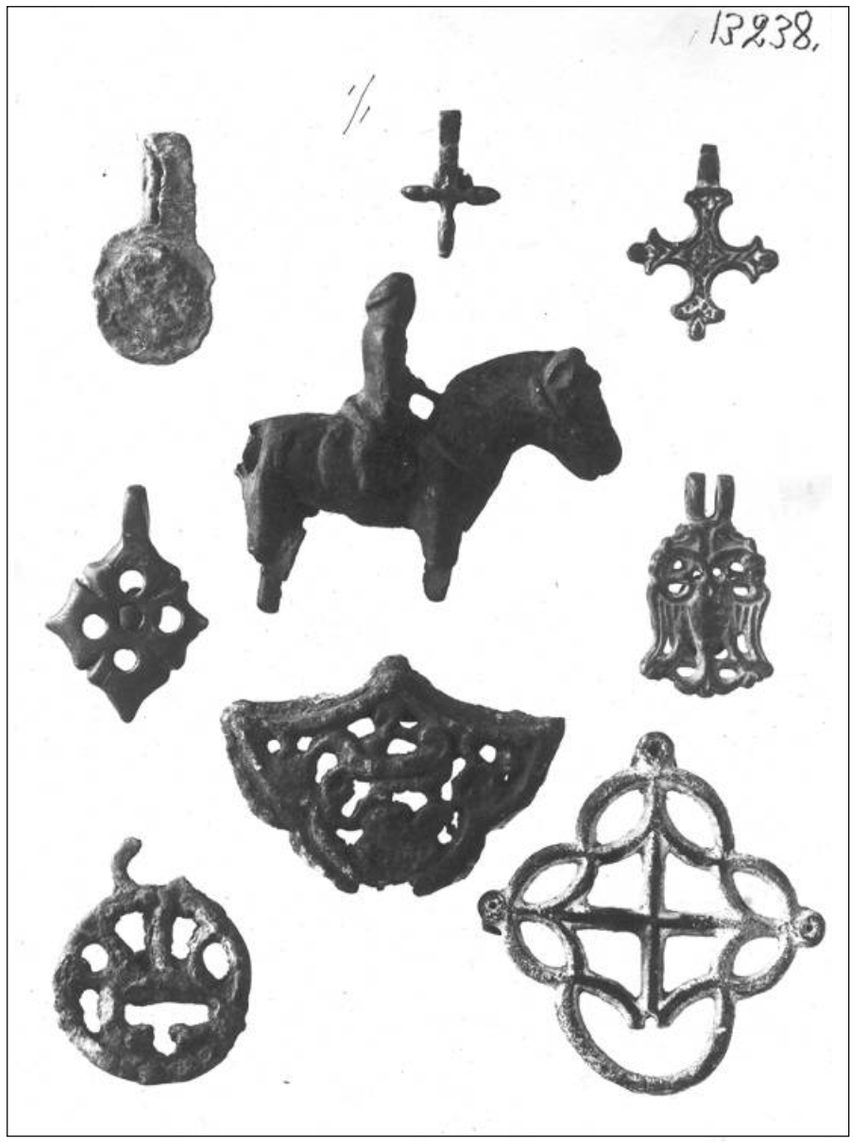

Fig.11. Photo of the finds of the beginning of XXth century from Uvek site
(Photo archives of IIMK, No II 32428-430).

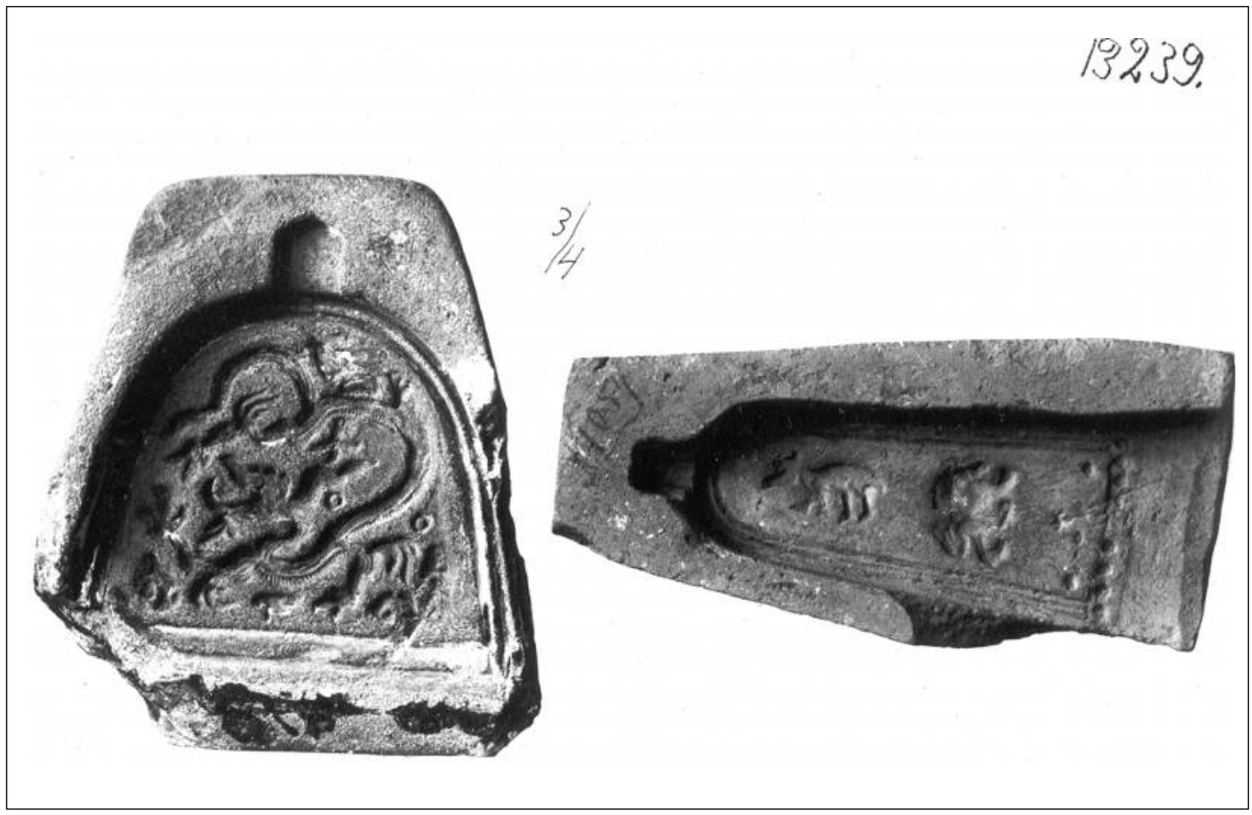

Fig.12. Photo of the ceramic finds of the beginning of XXth century from Uvek site
(Photo archives of IIMK, No II 32428-430).

Fig.13. Photo of the glass, kashi and cornelian beads from the finds of F.V.Dukhovnikov of 1893
from Uvek site (GIM, No 34162, op.952, No 22).

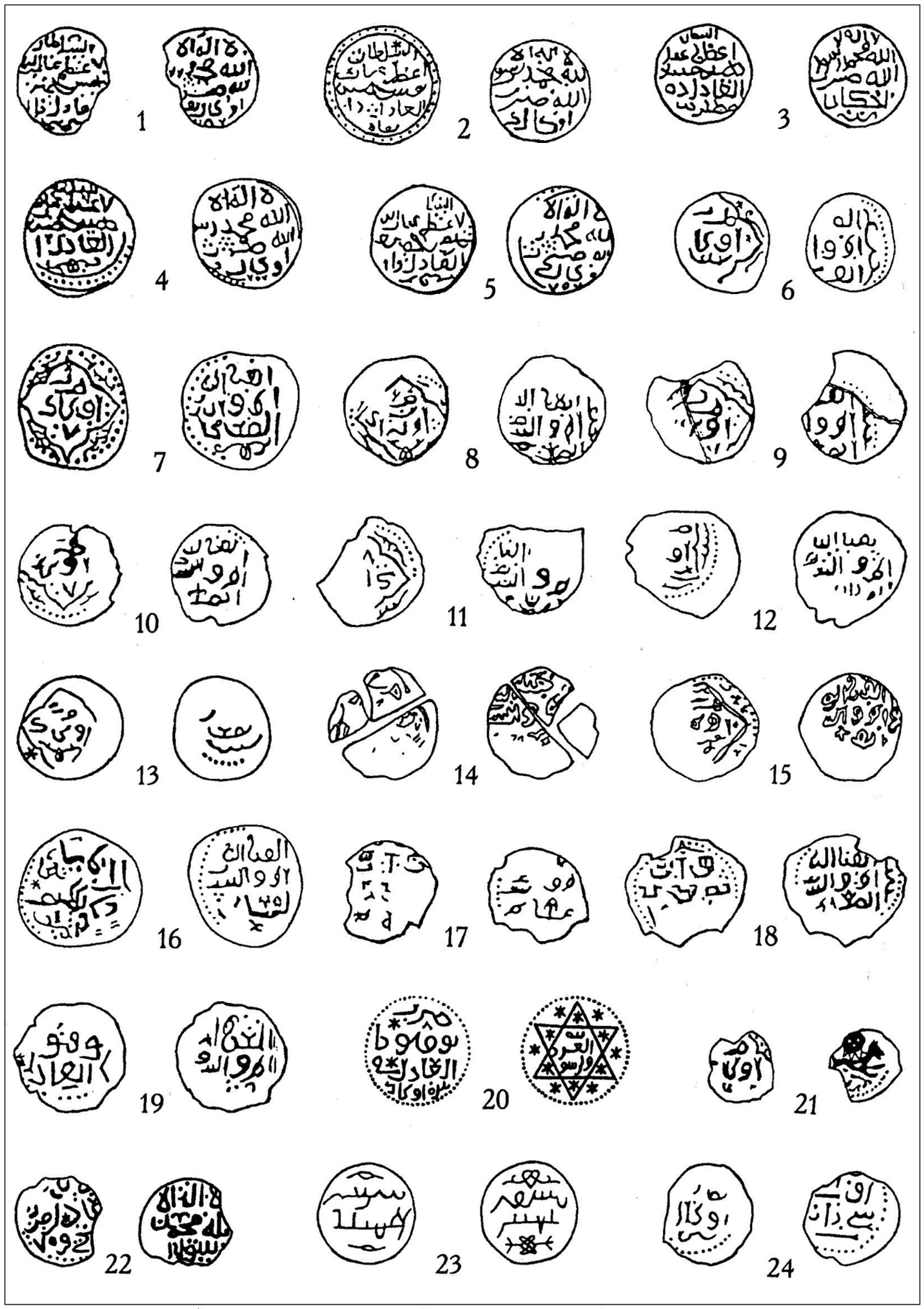

Fig.14. Coins of Ukek strike (1-22 - silver, 23-24 - copper).

Fig.15. Ukek dirhems of type 1; obverse (GE, No 15308-15310).

Fig.16. Ukek dirhems of type 1; reverse (GE, No 15308-15310).

Fig.17. Ukek dirhem of type 1; obverse (GE, No 15312).

Fig.18. Ukek dirhem of type 1; reverse (GE, No 15312).

Fig.19. Ukek dirhem of type 1; obverse (GE, No 15365).

Fig.20. Ukek dirhem of type 1; reverse (GE, No 15365).

Fig.21. Ukek dirhem of type 1; obverse (GE, No 15586).

Fig.22. Ukek dirhem of type 1; reverse (GE, No 15586).

Fig.23. Ukek dirhem of type 1; obverse (GE, No 15587).

Fig.24. Ukek dirhem of type 1; reverse (GE, No 15587).

Fig.25. Ukek dirhems of type 1; obverse (GE, No 15588-15589).

Fig.26. Ukek dirhems of type 1; reverse (GE, No 15588-15589).

Fig.27. Ukek (?) dirhems of type 8; obverse (GE, No 24688-24689).

Fig.28. Ukek (?) dirhems of type 8; reverse (GE, No 24688-24689).

Fig.29. Ukek (?) dirhem of type 8; obverse (GE, No 24690).

Fig.30. Ukek (?) dirhem of type 8; reverse (GE, No 24690).

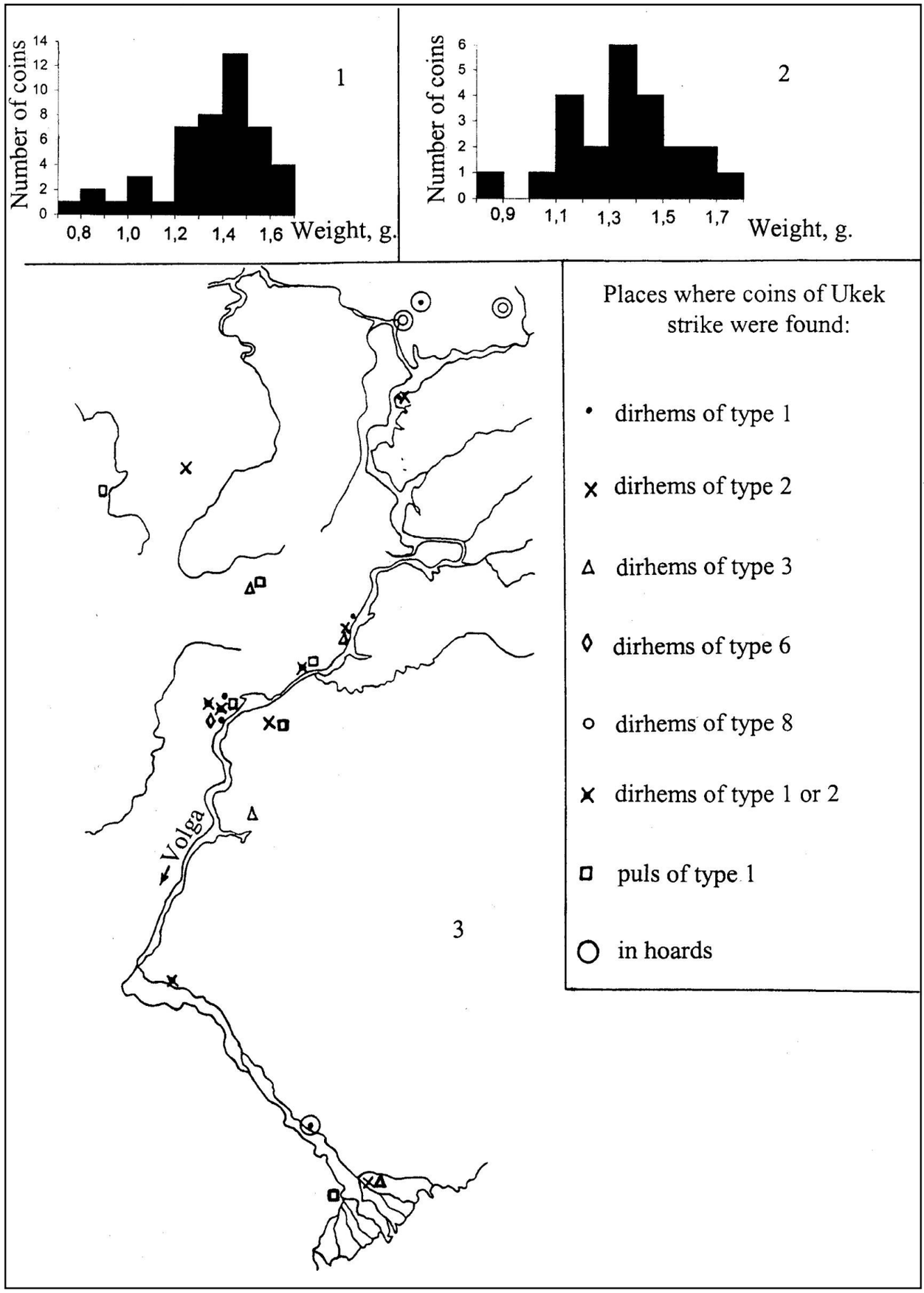

Fig.31. 1-2 - weight diagrams of Ukek dirhems of types 1 and 2, 3 - cartography of finds of Ukek coins.

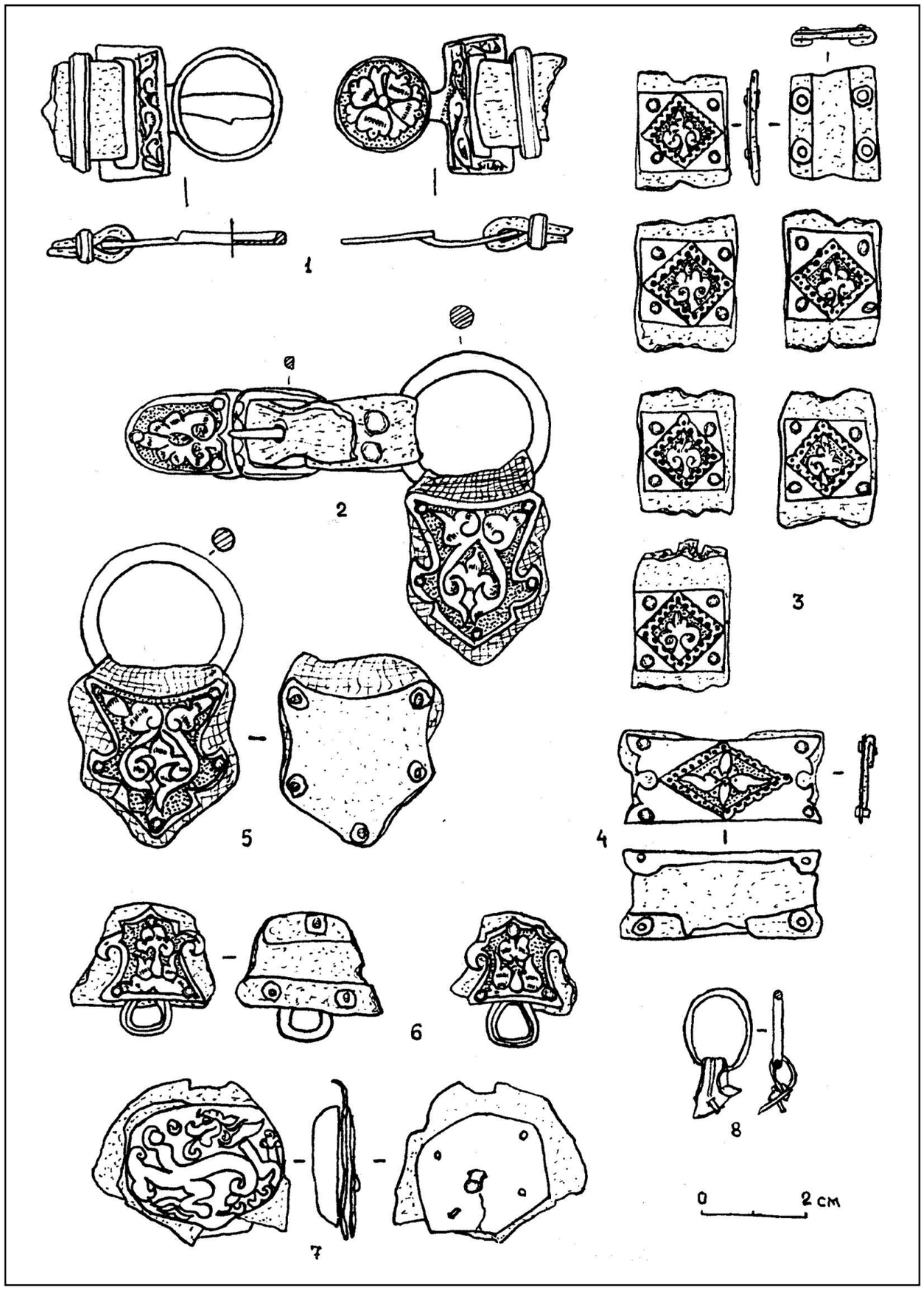

Fig.32. Details of a silver belt set from the burial 4 of mausoleum, excavated in 1913 (SOMK. General museum N SOMK D3-23). 1 - N SMK 42239, 2 - N SMK 42237, 3 - N SMK 42232, 4 - N SMK 42233, 5 - N SMK 42234, 6 - N SMK 42238, 7 and 8 - N SMK 42240.

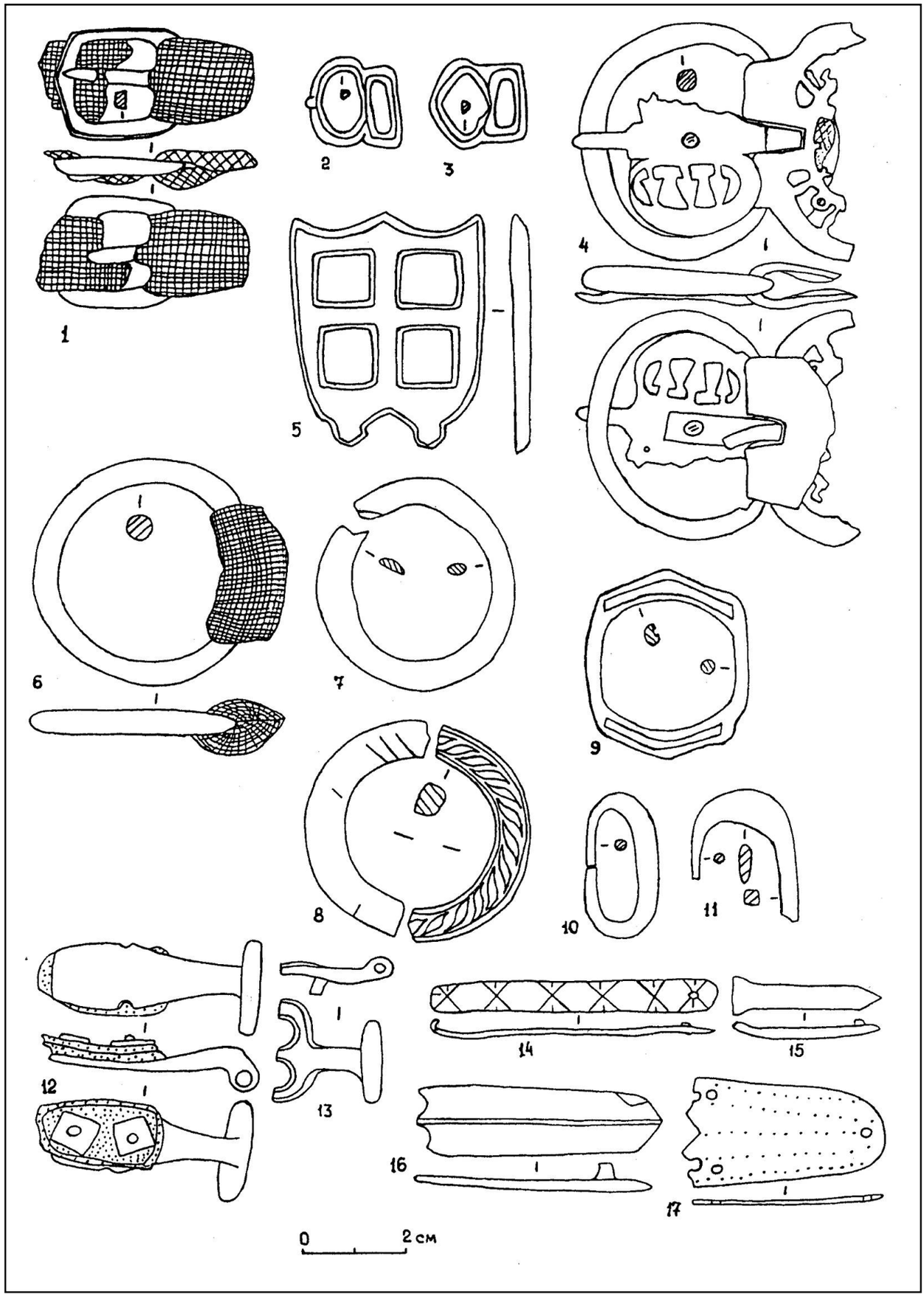

Fig.33. Buckles, belt rings and tips of belts (13 - iron, others - alloys on a copper basis).
1-6, 12-17 – SOMK NN SMK 52573, 1309/5, NVSP 28704, 1309/2, NVSP 29772, SMK 52574, NVSP 29771, NVSP 28703, NVSP 28708, 1220/4, 1223, 1040/1-2. 7-11 - NMRT NN 5365-64 and 5365 (7).

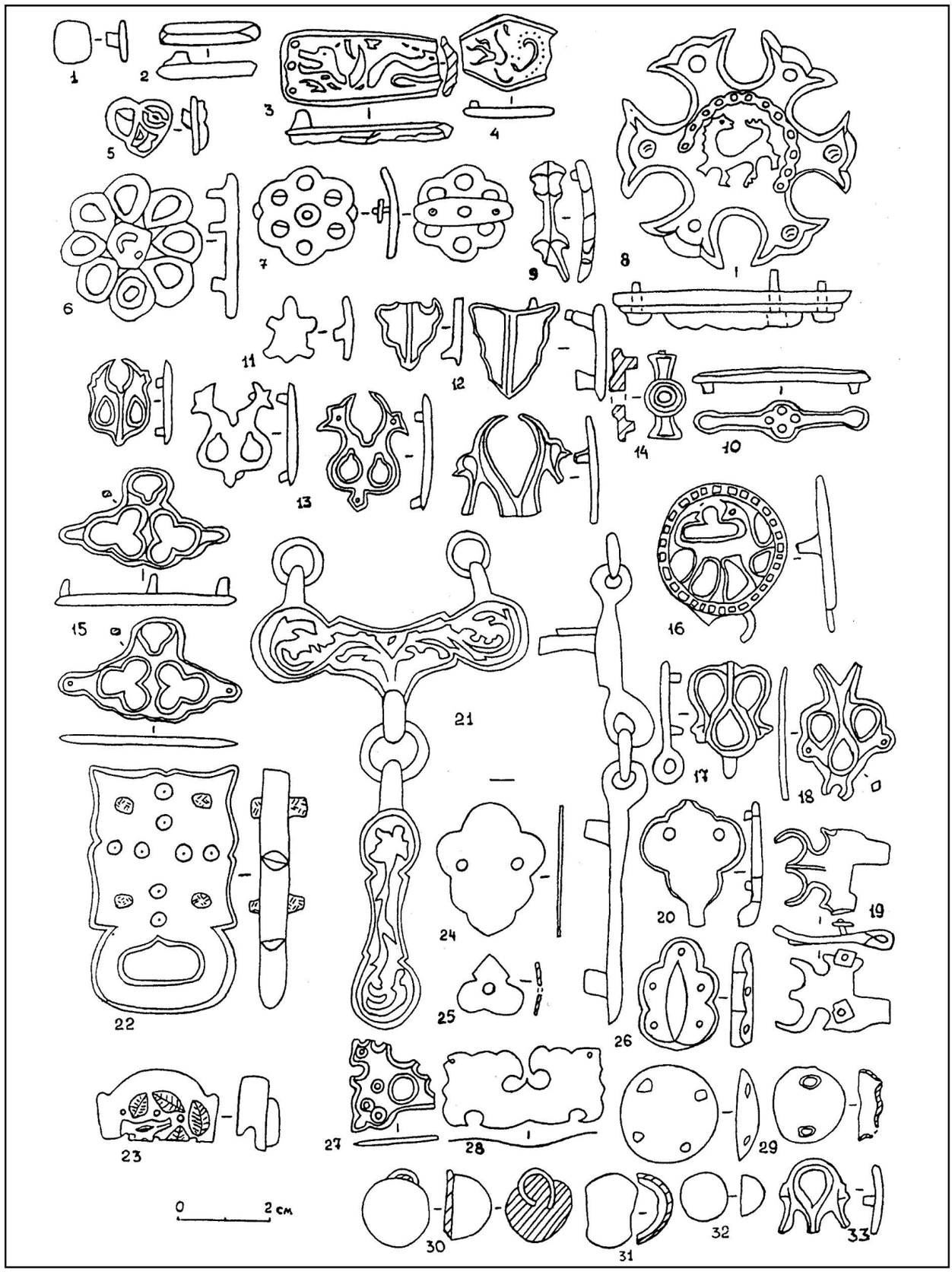

Fig.34. Brackets and stripes (1-21,24,27-33 - bronze, 22 - bone and iron, 23 - stone, 25 - iron, 26 - bone).
1-2, 4, 6-9, 11-12, 13b-20, 23-25, 28-33 - SOMK NN 1252/1 (1,12a, 20), 1229, NVSP 27822, SMK 52027, SMK 52032, SMK 39853, 1222/6, SMK 52021, NVSP 28714, SMK 52038, 1219/1 (13d, 19), NVSP 27840, SMK 52040, SMK 52028, 1309/4, SMK 52037, SMK 52022, NVSP 31371, SMK 52023, NVSP 28707, SMK 52024, NVSP 28712, 1223, NVSP 30219, 1043/1 (31-32), NVSP 29777. 3, 5, 13a, 21, 26-27 - NMRT NN 5365-64 (3,27), 5365 (5,13a), 5365-32, 5365-63.
10, 22 - Archaeological club-museum at the Saratov regional station of young tourists.

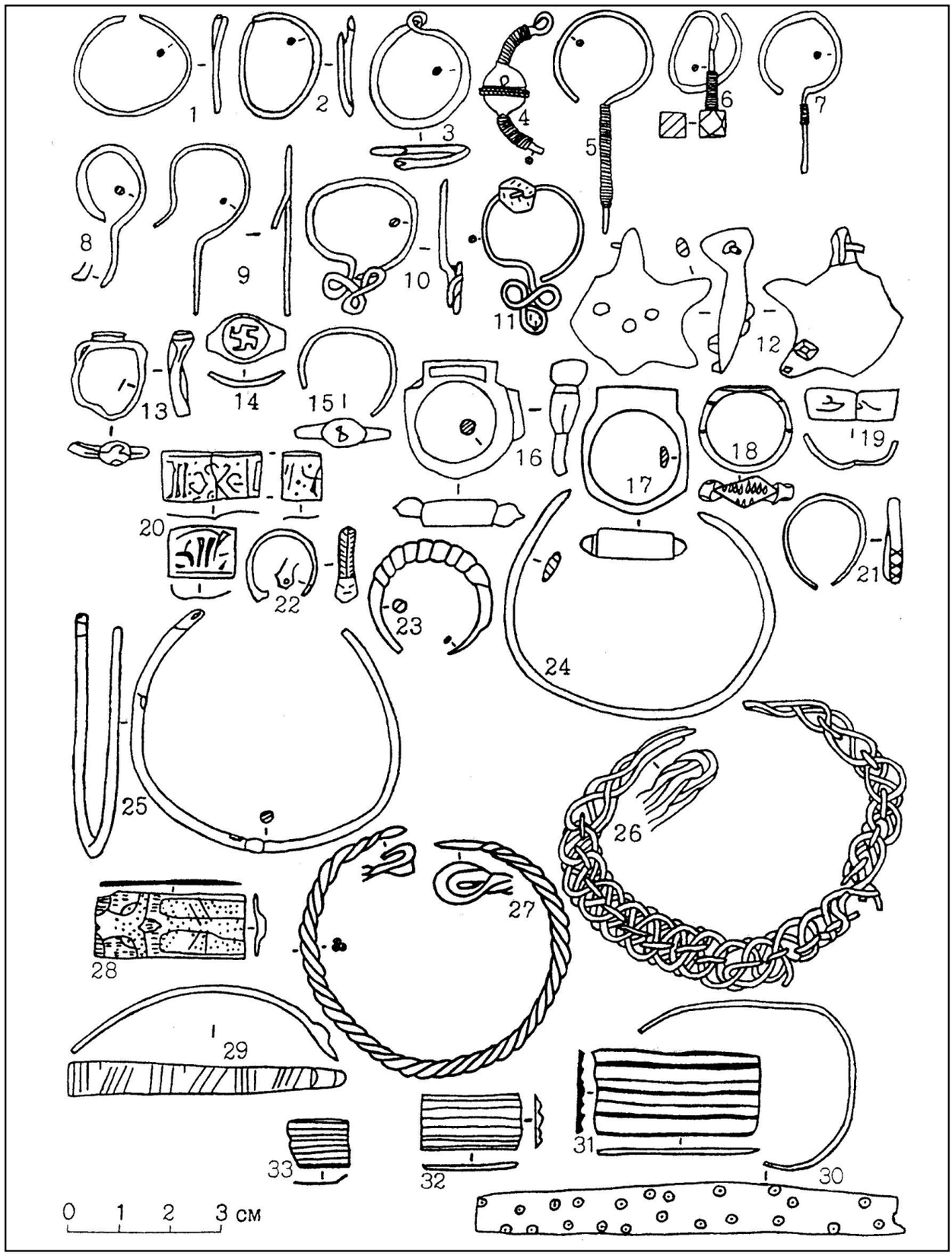

Fig.35. Bronze temple rings (1-4), earrings (5-11), kolt (12), finger rings (13-23) and bracelets (24-33). 1-3, 11, 13-14, 16, 19-22, 26, 29, 32-33 - SOMK NN 1040/1,2; NVSP 23302 (SUAK 1014, AO 269/7); SMK 52031 (A - 2317, AO 168); SMK 60705; 1040; 1251; SMK 52026 (A - 2312, AO 266/5); 1229; NVSP 28706 (AO 263/4); SMK 52030 (A - 2316, AO 168/5); 1223; SMK 43924; NVSP 28701 (SUAK 1045, AO 262/1); NVSP 29937 (SUAK 1045/15); 1245. 4-5, 17-18, 23, 27 – GE NN ZO-153, 7273,15, V.B.c.1684; ZO-143; ZO-148, 7273,8a; ZO-150, 7273,8b; ZO-388; ZO-161, 7273,189. 6 - GIM N 34162, inventory 952, N 32. 7-10 - Archaeological club-museum at the Saratov regional station of young tourists. 12, 15, 24-25, 28, 30-31 - NMRT NN 5365-64 (everything, except for 31; 12 - OAIII-18), 5365-32 (31 - OAIII-17).

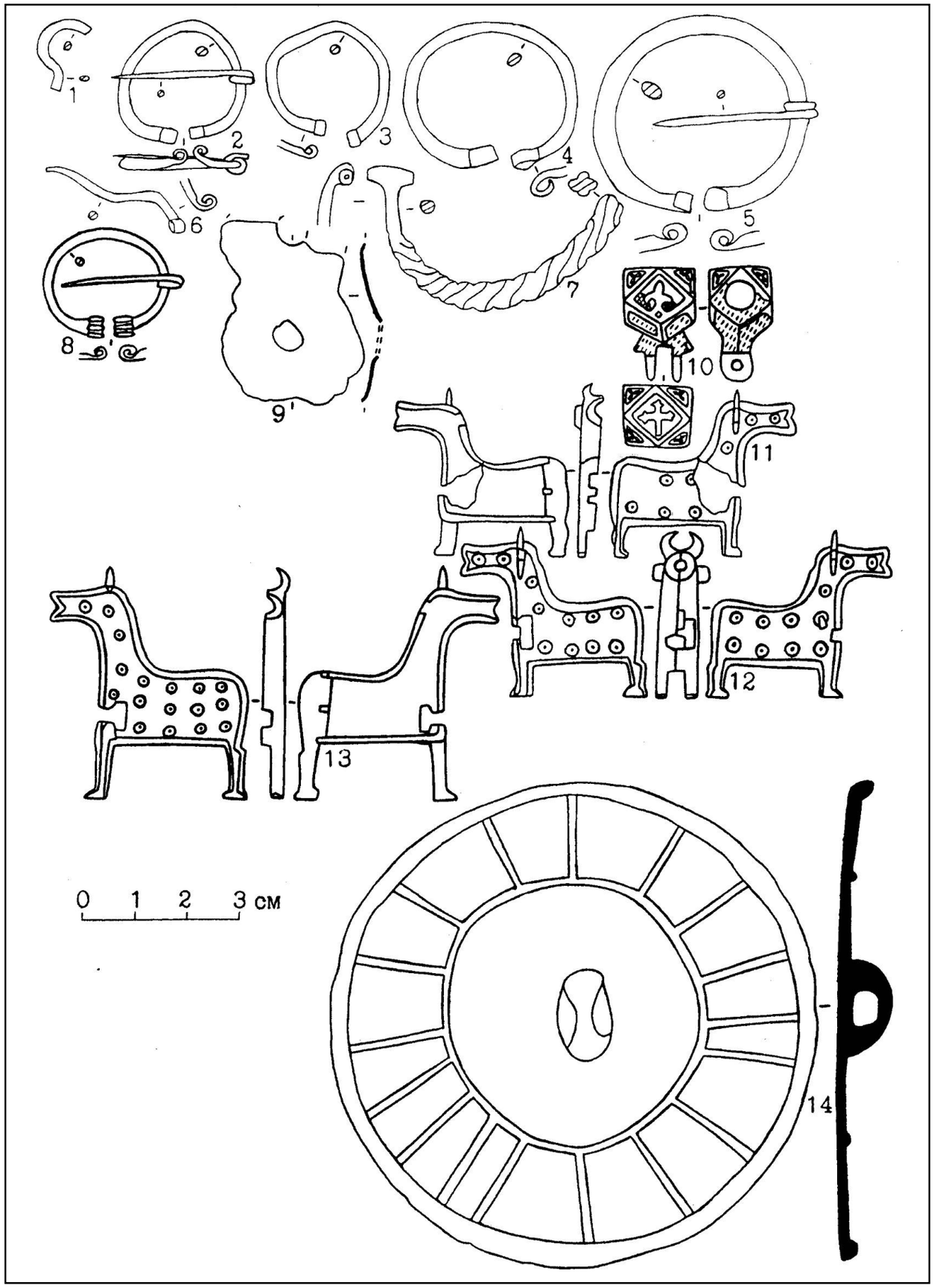

Fig.36. Bronze syul'gamas (1-8), fragment of vessel's handle (9), gilded eyelet from enkolpion with green and red enamels (10), halves of locks (11, 13), lock (12) and mirror (14). 1-9, 11-14 - Uvek, 10 - Hmelevskoe I settlement. 1-7, 10 - SOMK NN 1220/1, 1229, 1309/1, NVSP 28695 (AO 262), SMK 65558. 8, 11-14 - GE NN ZO-152, 7273,13; ZO-165a,b, 7273,55; ZO-166a,b; ZO-164; ZO-141, inventory III, 1471. 9 - NMRT N 5365-64.

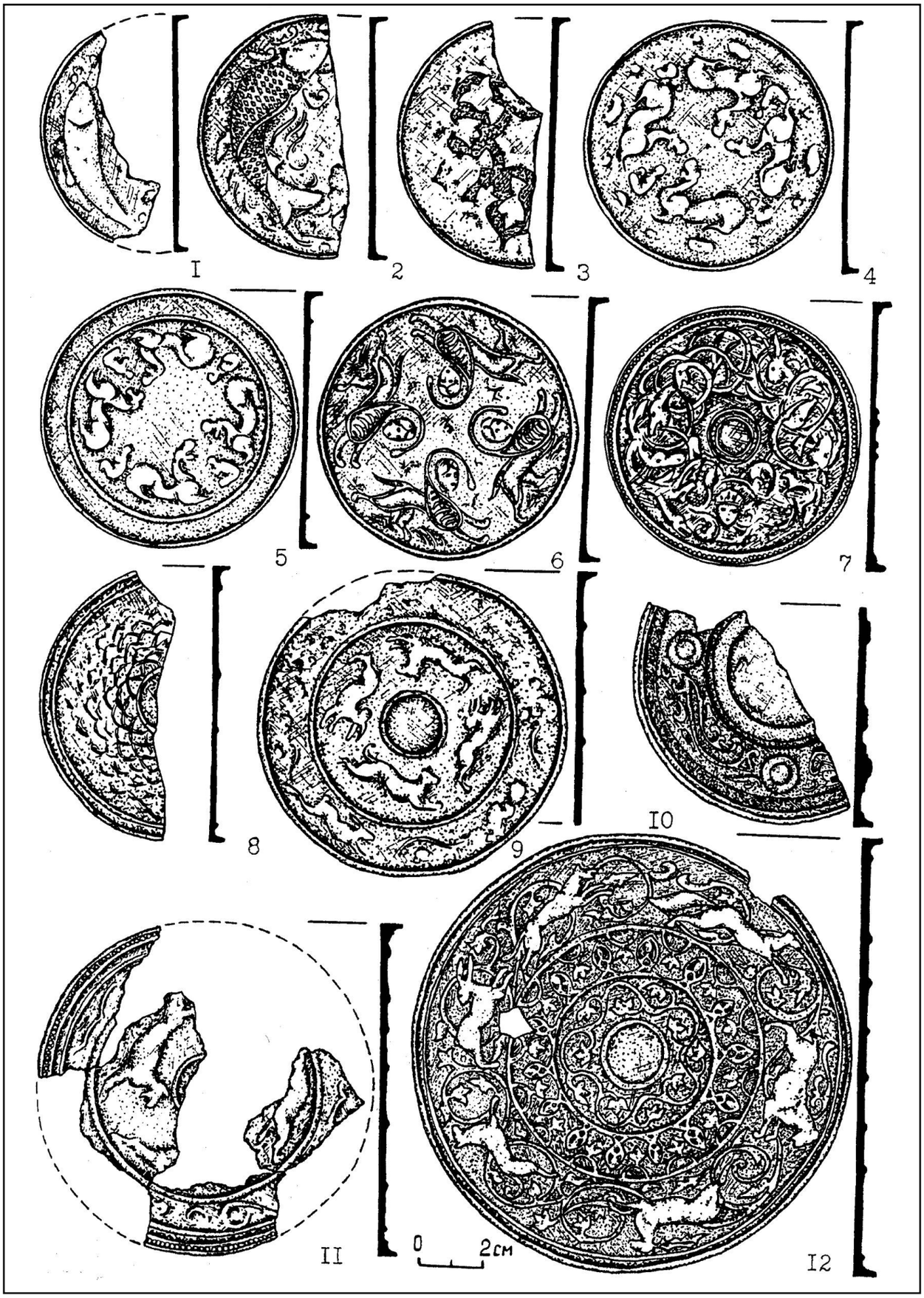

Fig.37. Bronze mirrors with copper oxides. 1-3, 10 - NMRT N 5365-7, AA7-54, old NN 13277, 13278, 20689; AA7-57?, old N 13273. 4-9, 11-12 - SOMK NN SMK 52034/A-2320 (AO 295); SMK 52445/A-2370 (AO 301); AO 97?; AO 972; AO 973; SMK 52033/A-2319 (AO 294); NVSP 31164; SMK 57913 (AO 289).

Fig.38. Bronze mirrors. GIM N 34162, inventory 952, NN 35-38, 40.

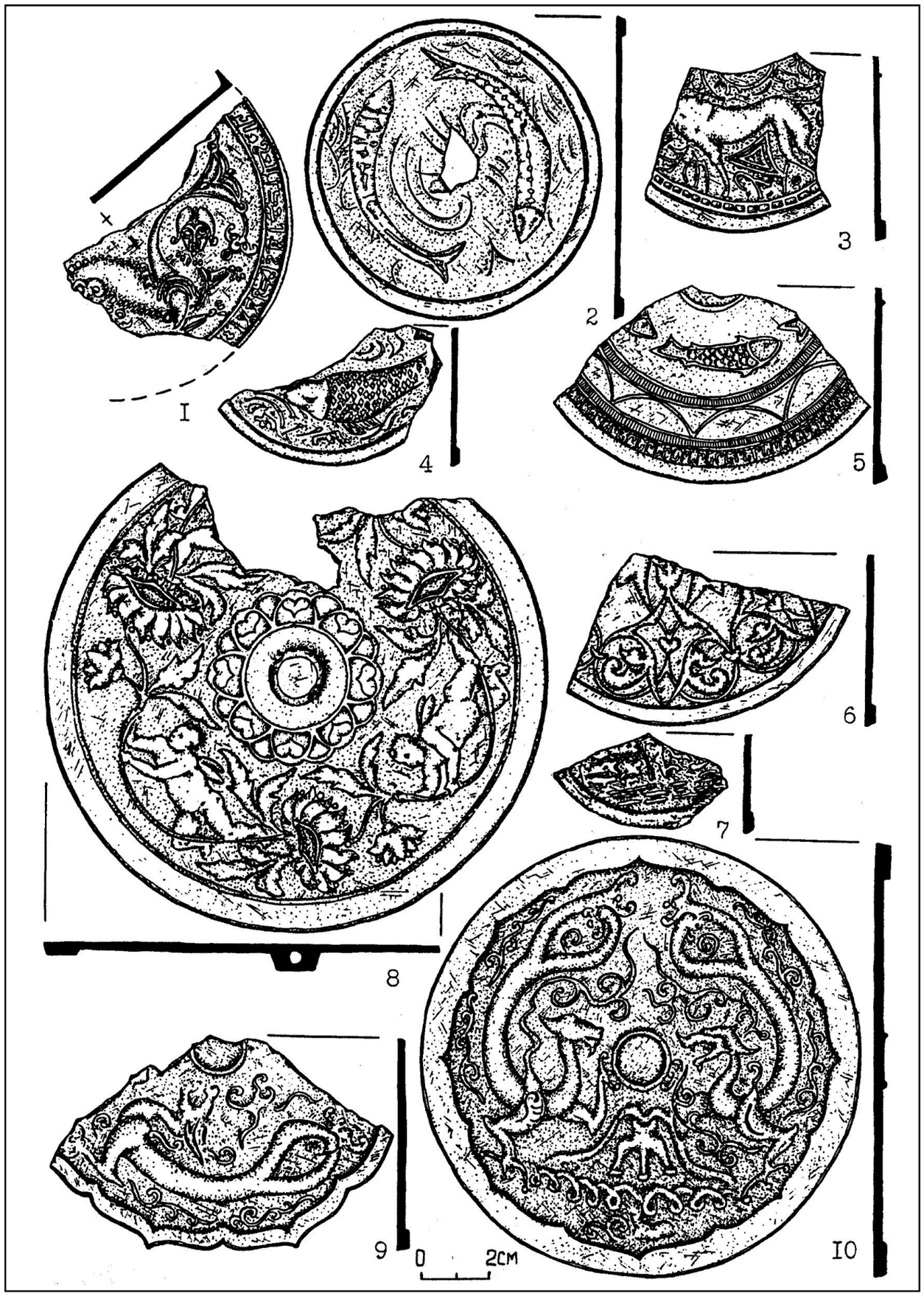

Fig.39. Mirrors from an alloy of grey-steel colour (1, 3-7, 9-10) and with copper oxides (2, 8).
1, 3, 5-6, 8-10 - SOMK NN AO 2897; NVSP 28299 (AO 287); NVSP 28298 (AO 286); AO 974; SMK 57812 (SUAK 120, AO 285); NVSP 31367; SMK 57912. 2, 4, 7 - NMRT N 5365-7, inventory N 6302, old N 18506 and without additional NN.

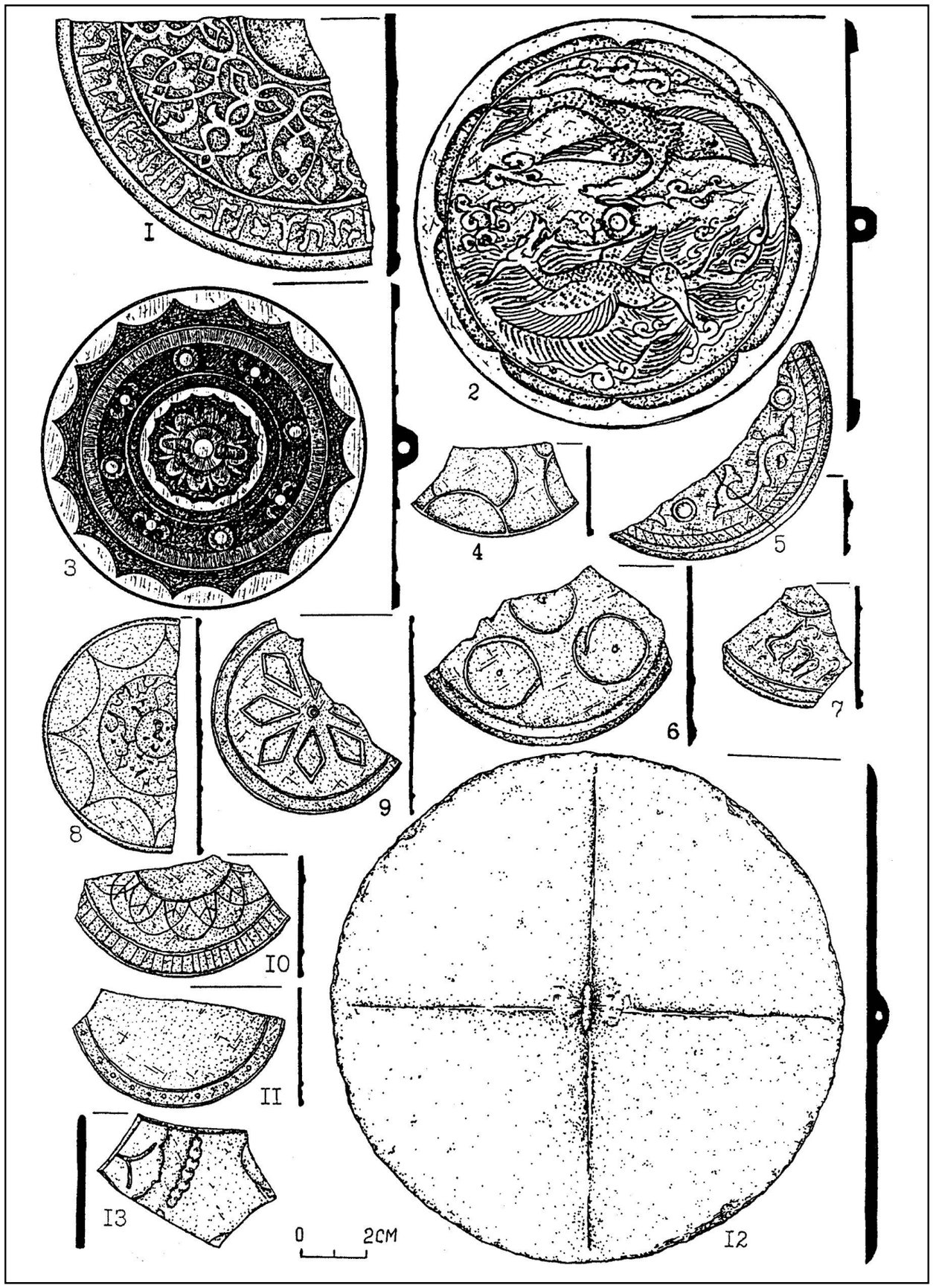

Fig.40. Mirrors from an alloy of grey-steel colour (1, 5, 7, 13) and with copper oxides (2-4, 6, 8-12).
1, 4, 9, 11-12 - SOMKVN NVSP 31413; NVSP 31162; SMK 57916 (AO 299); NVSP 30981 (AO 579); SMK 57950 (SUAK 2441/10, AO 327/8); 2-3 - find of 1994. 5-8, 10, 13 - NMRT N 5365-7, old N 22689, AA8-24, inventory N 6355, old N 18507 and without additional NN.

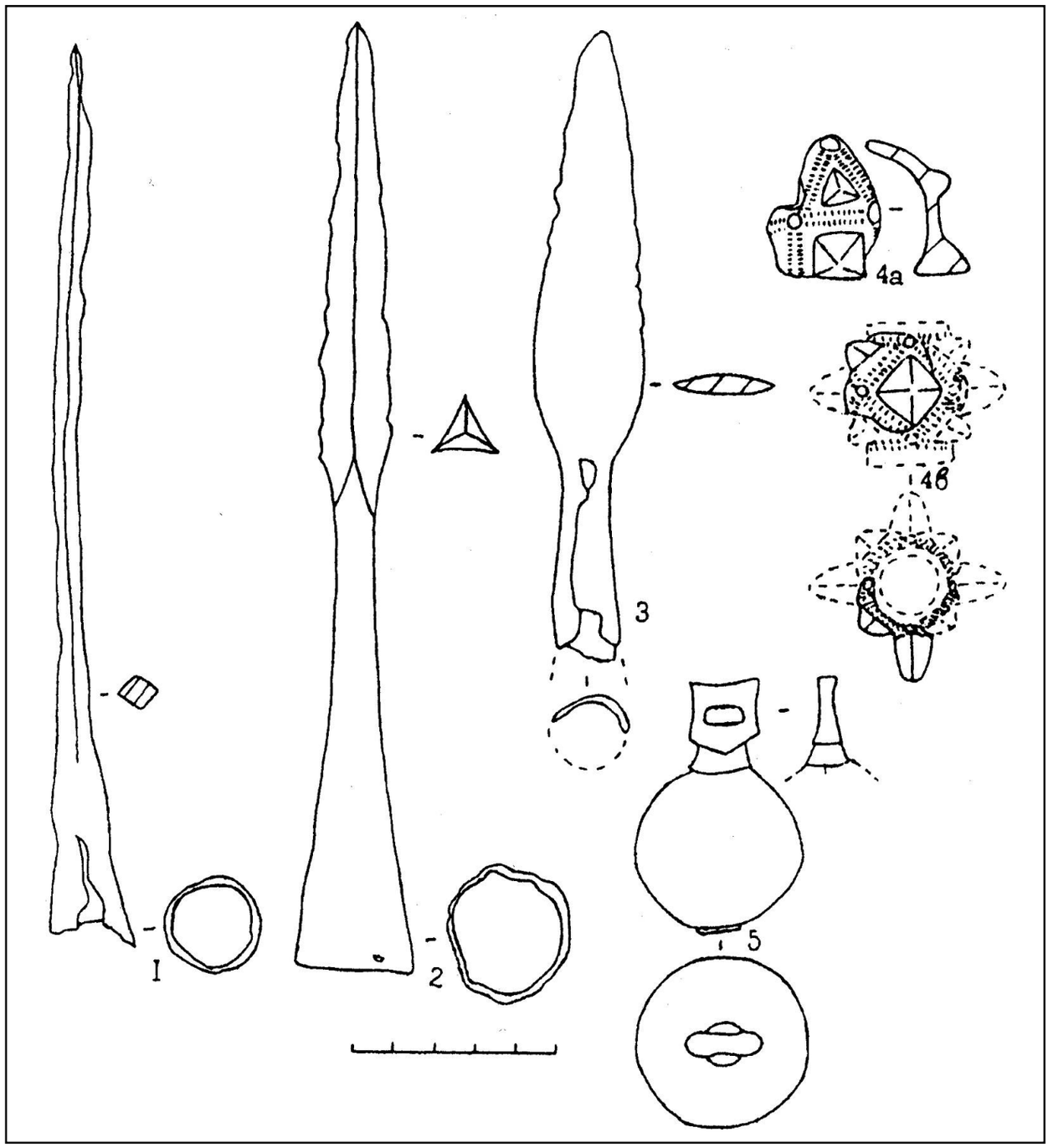

Fig.41. Spears (1-3), a fragment of a mace-head and its reconstruction (4a-b), kisten (5).
1-3, 5 (iron) - NMRT NN 5365-1 (inventory 1770), 13318, 5365-4, 5365-23. 4 (bronze) - SOMK N 1222/6.

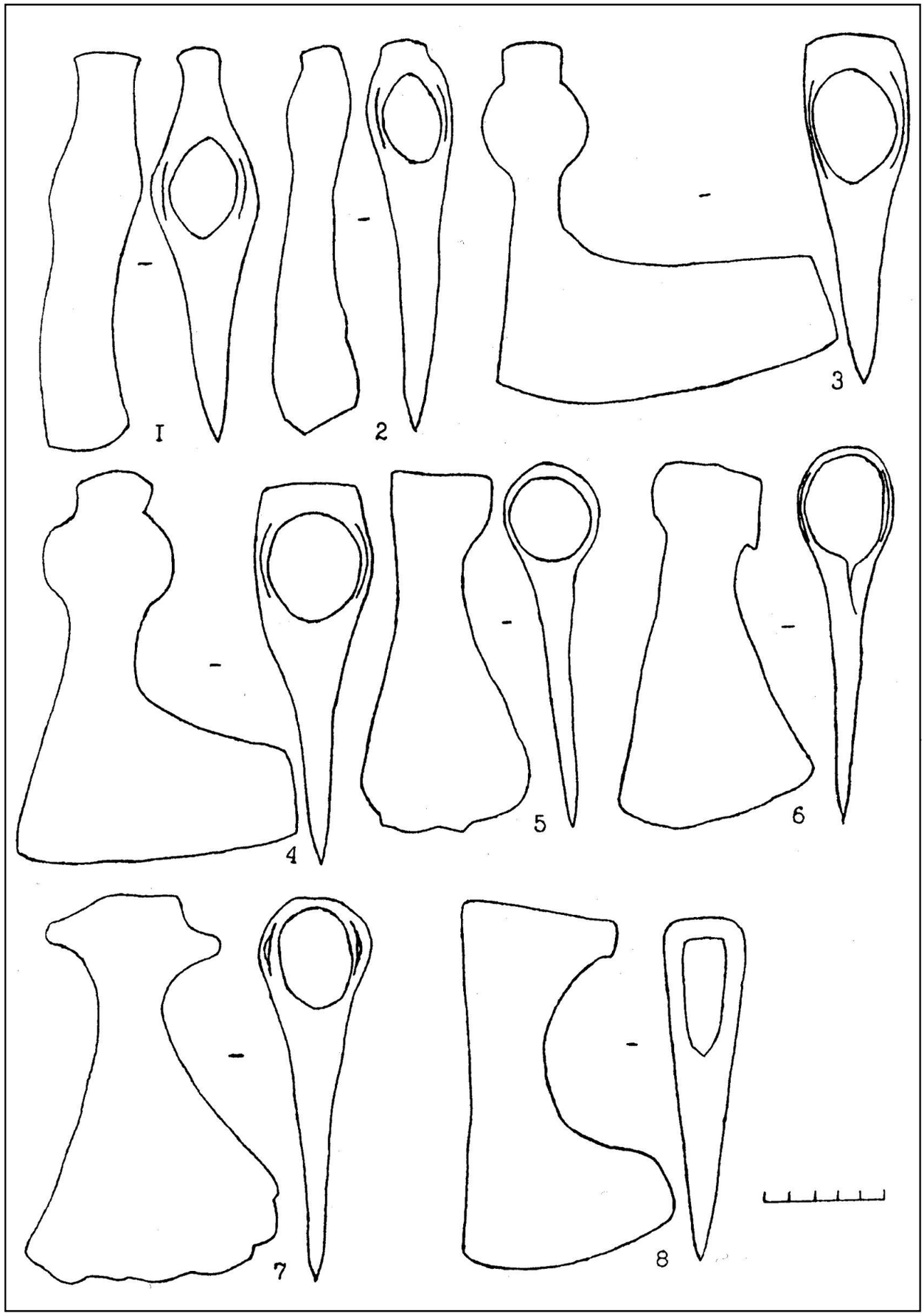

Fig.42. Iron axes. 1-4, 7-8 - NMRT N 5365-10, inventory NN 1807, 1821, 1815, 1813, 1809, 1812.
5-6 - SOMK NN NVSP 53475, 53476 (A-2423, 2424; AO 311, 312).

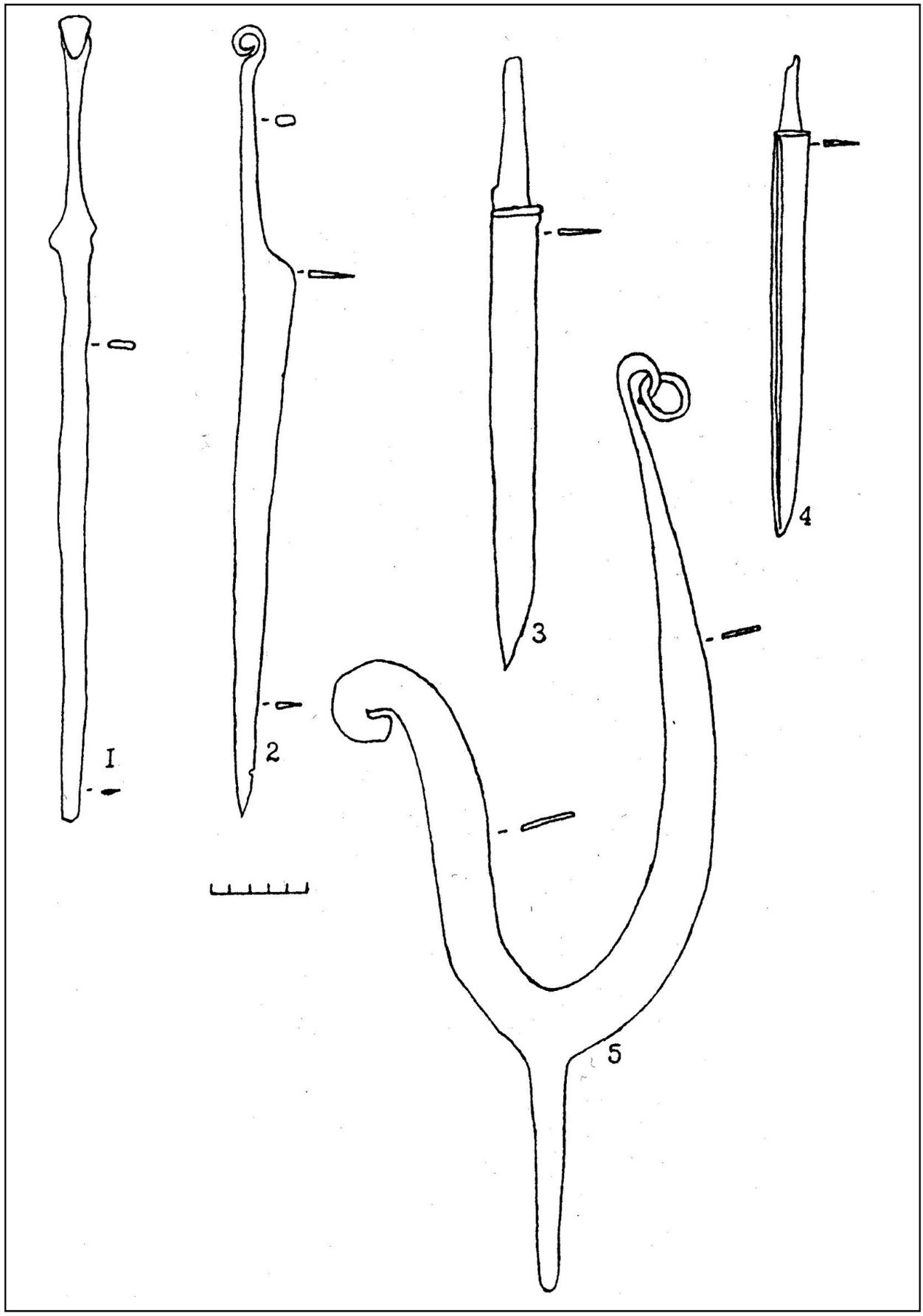

Fig.43. Iron dagger (1), knifes (2-4) and bunchuk (5).
1-5 - NMRT NN 5365-2, 5365-23 (inventory NN 1793-1794), 5365-25, 5365-28, 5365 (OAIII-59).

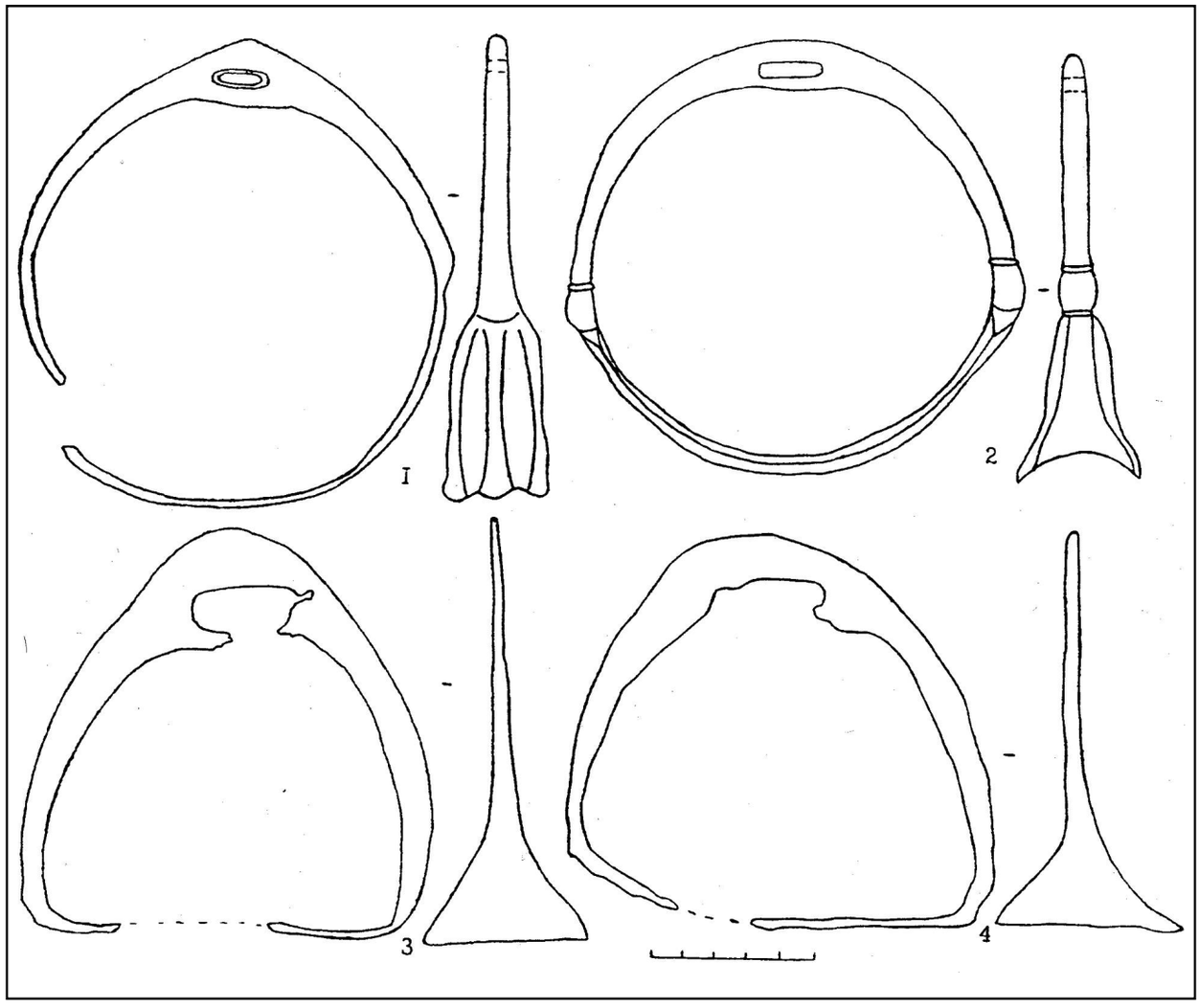

Fig.44. Iron stirrups.
1-4 - NMRT N 5365-16, inventory NN 1764, 1763 and without inventory NN.

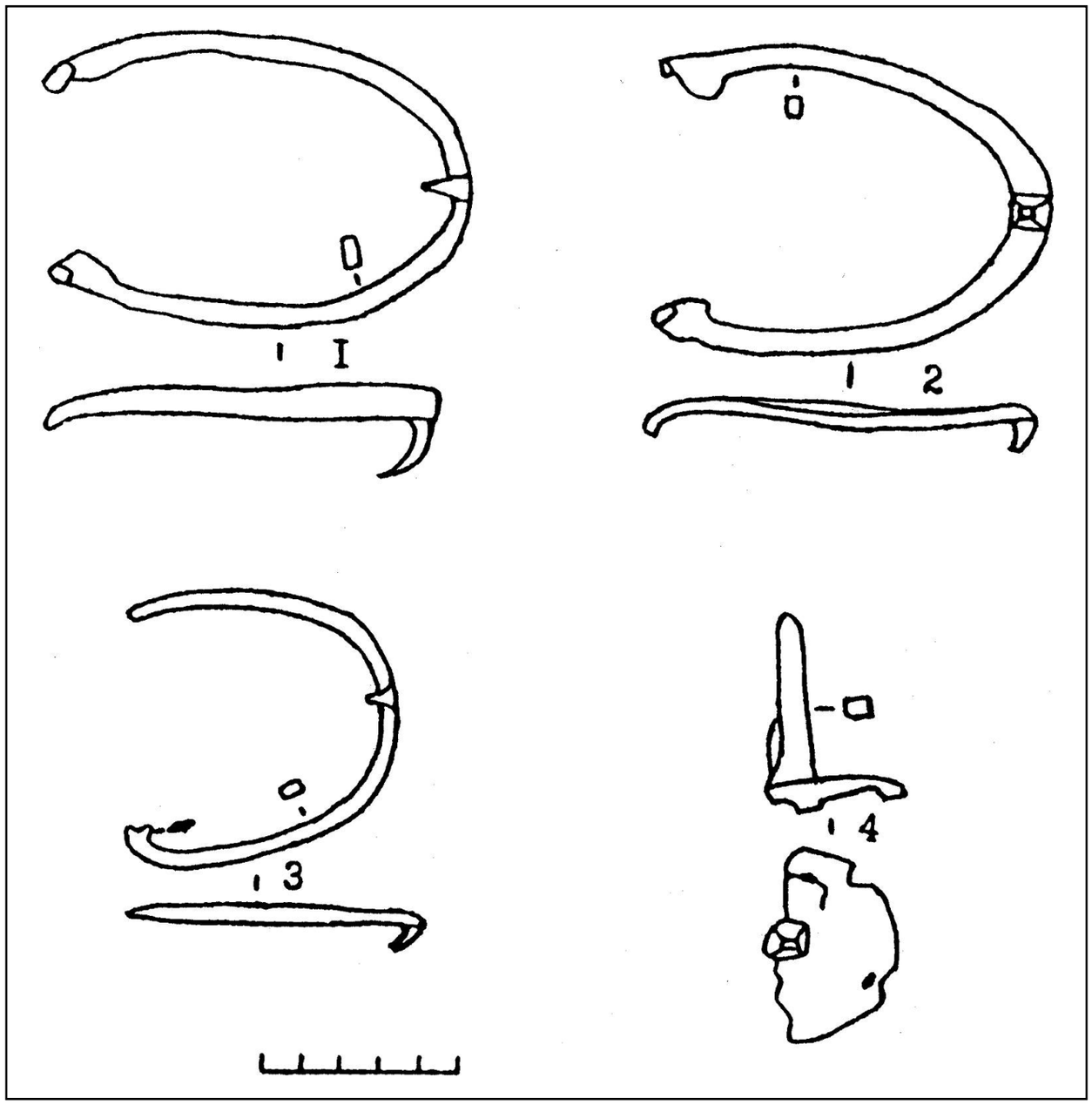

Fig.45. Iron horseshoes (1-3) and ice-walking thorn (4).
1-2, 4 - NMRT N 5365-24, inventory NN 1765-1766, 1728. 3 - SOMK N NVSP 29906 (AO 316/3).

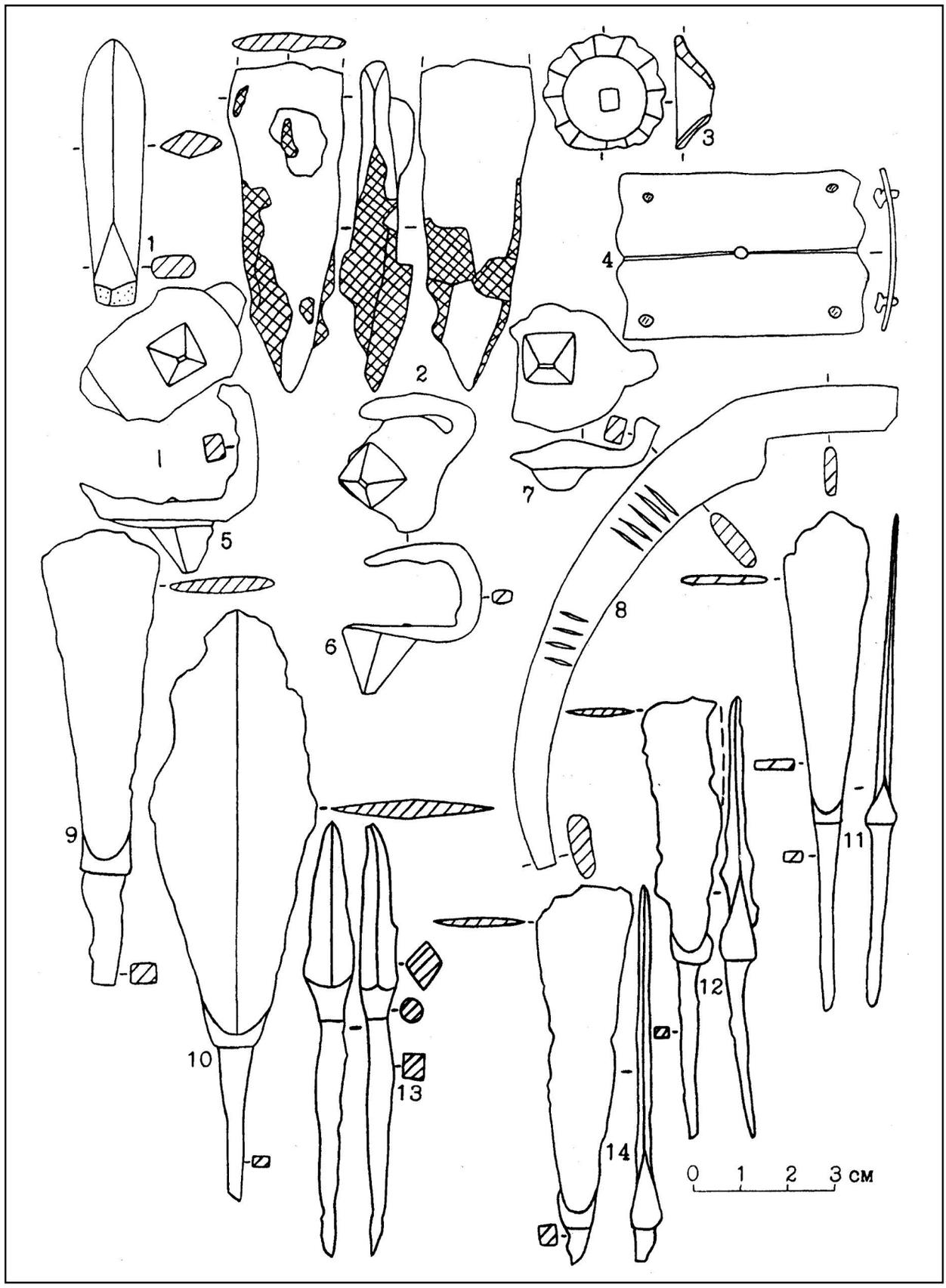

Fig.46. Arrowheads (1, 9-14), a fragment of a dagger (2), a top of a helmet (3), an armour plate (4), ice-walking thorns (5-7), a part of stirrup (8). 1 - bone, 2 - iron and fabric, 3-14 - iron. 1,4 - Podgornoe, 2-3,6-8 - Uvek, 5,9-10 - Podstepnoe, 11,12-14 - Hmelevskoe I settlement. 1,4,11 - Research Archaeological laboratory of the Saratov State University. 2 - NMRT N 5365-32 (old N 278). 3,5-8,12-14 - SOMK NN 1247, NVSP 22255 (AO 870/4), NVSP 34032 (AO 992?), 1040, excavations of 1999 (inventory NN 3, 12) and 2000 (inventory N 79). 9-10 - EKM N 8408 and without number (find of 1984).

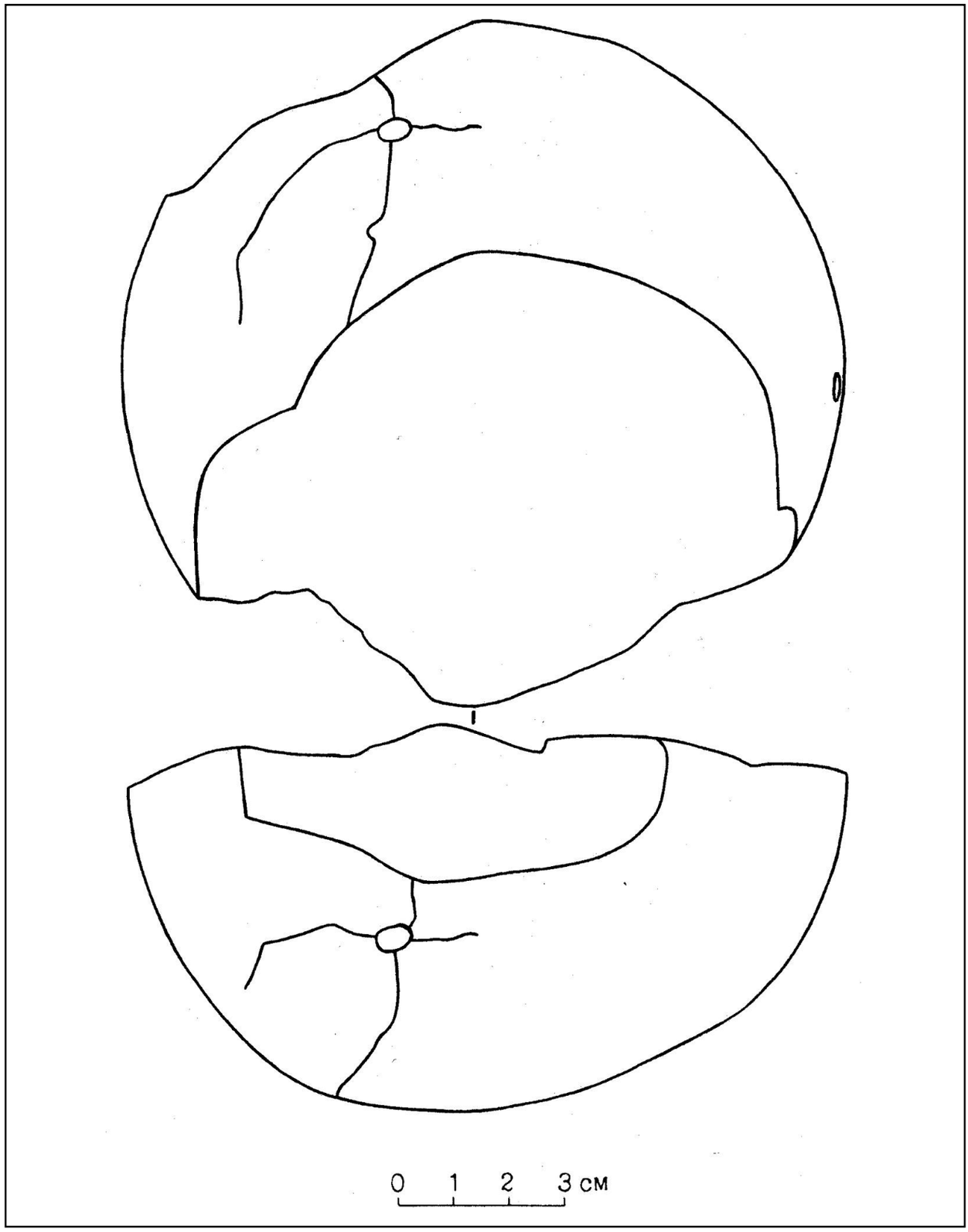

Fig.47. Ceramic bomb from the Uvek site. GE N ZO-365, reg. N 58717.

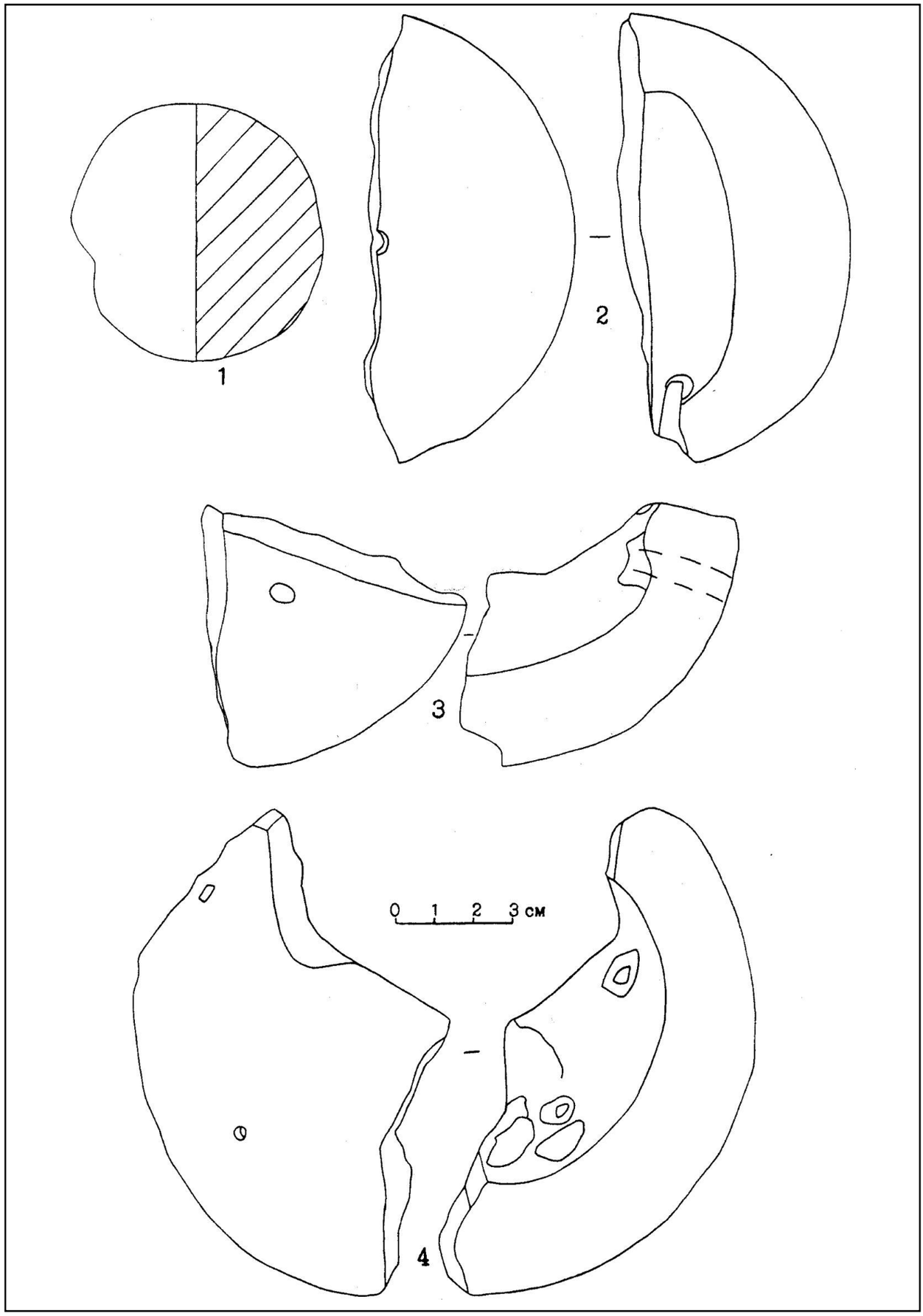

Fig.48. Stone cannon bawl (1) and ceramic bombs (2-4) from the Uvek site. SOMK NN NVSP 18054 (SUAK 170); NVSP 17683 (AO 990); NVSP 31247 (SUAK 1014/21); 1647/3.

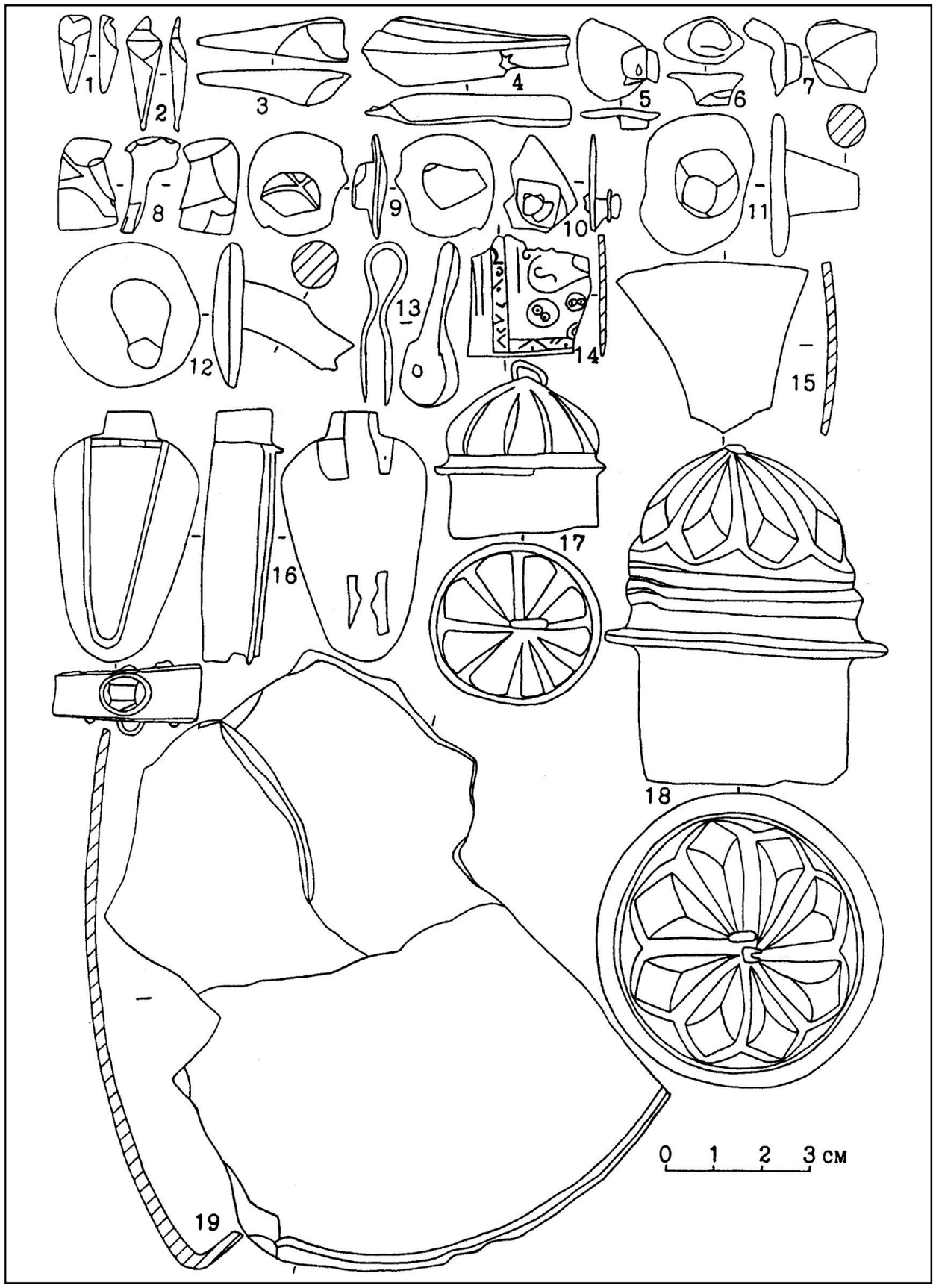

Fig.49. Bronze vessels and their parts. 1-12 - rivets, 13 - eyelet, 14-15 - walls, 16 - flask, 17-18 - lids, 19 - bottom. 1-11,14,16 - SOMK NN 1223; 1229; NVSP 18037 (SUAK 1776); 1220; 1222/6; 1228 (old N 1851); NVSP 29781 (SUAK 2360/4; AO 288). 12-13,15,17-19 - NMRT NN 5365-32; 5365-20 (AA 40-16); 5365-7 (old N 20689); 5365-30, OAIII-20, old N 18439.

Fig.50. Bronze lid of a vessel with silver incrustation, bought by F.V.Dukhovnikov in Uvek in 1893
(Photo archives of IIMK, No II 78488).

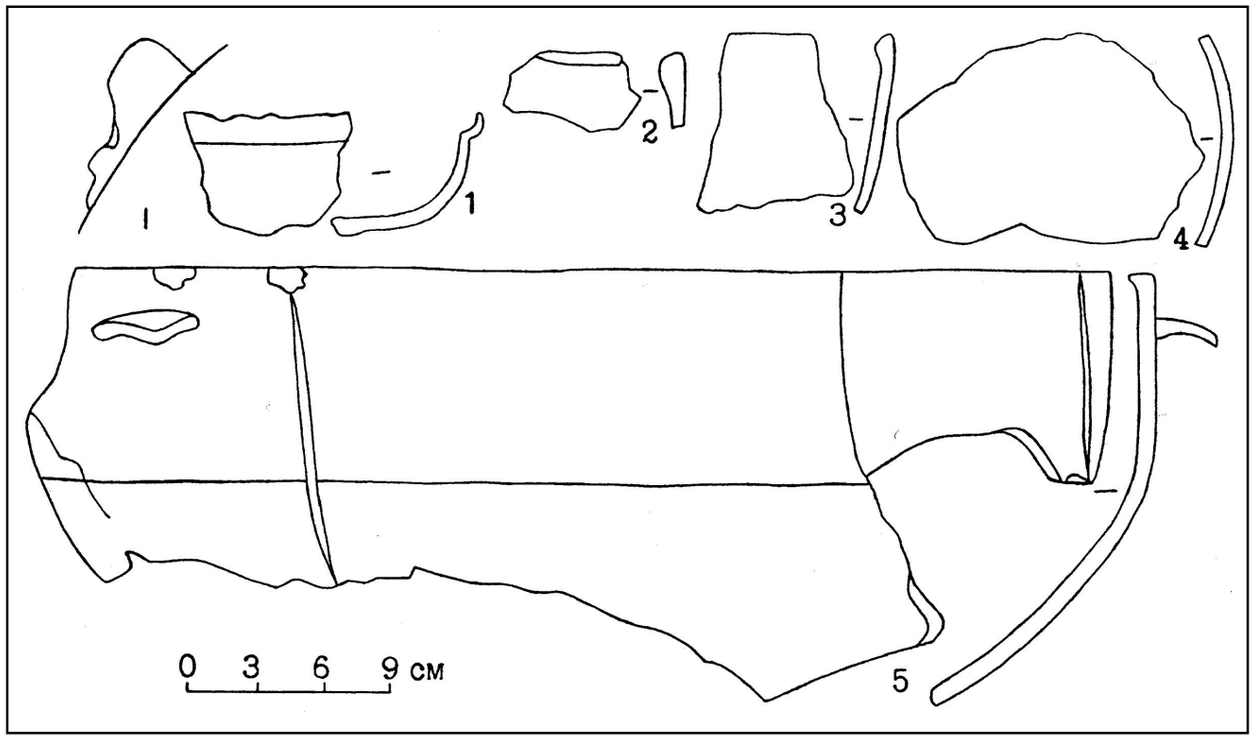

Fig.51. Cast-iron vessels.
1 - NMRT N 5365-30, inventory N 1768, old N 12734. 2-5 - SOMK NN 1040, 919, 1310 and without N.

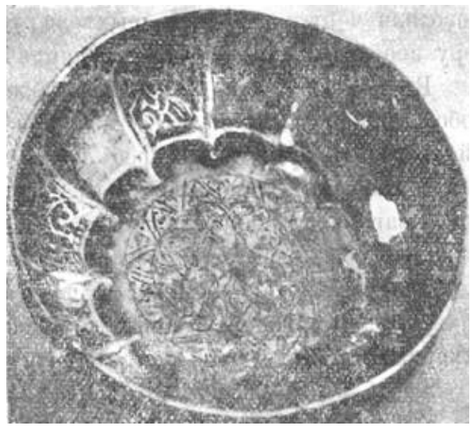

Fig.52. Silver bowl from burial 1 (in crypt) of Uvek mausoleum, excavated in 1913 (by Krotkov, 1915, p.121, photo 8).

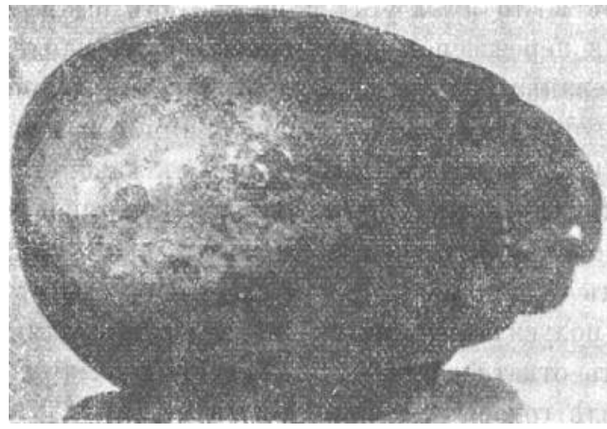

Fig.53. Silver small bowl from burial 5 of Uvek mausoleum, excavated in 1913 (by Krotkov, 1915, p.125, photo 14).

Fig.54. Silver gilded bowl from burial in crypt on Uvek site, excavated in 1913 (by Spitsyn, 1914, p.106, fig.40).

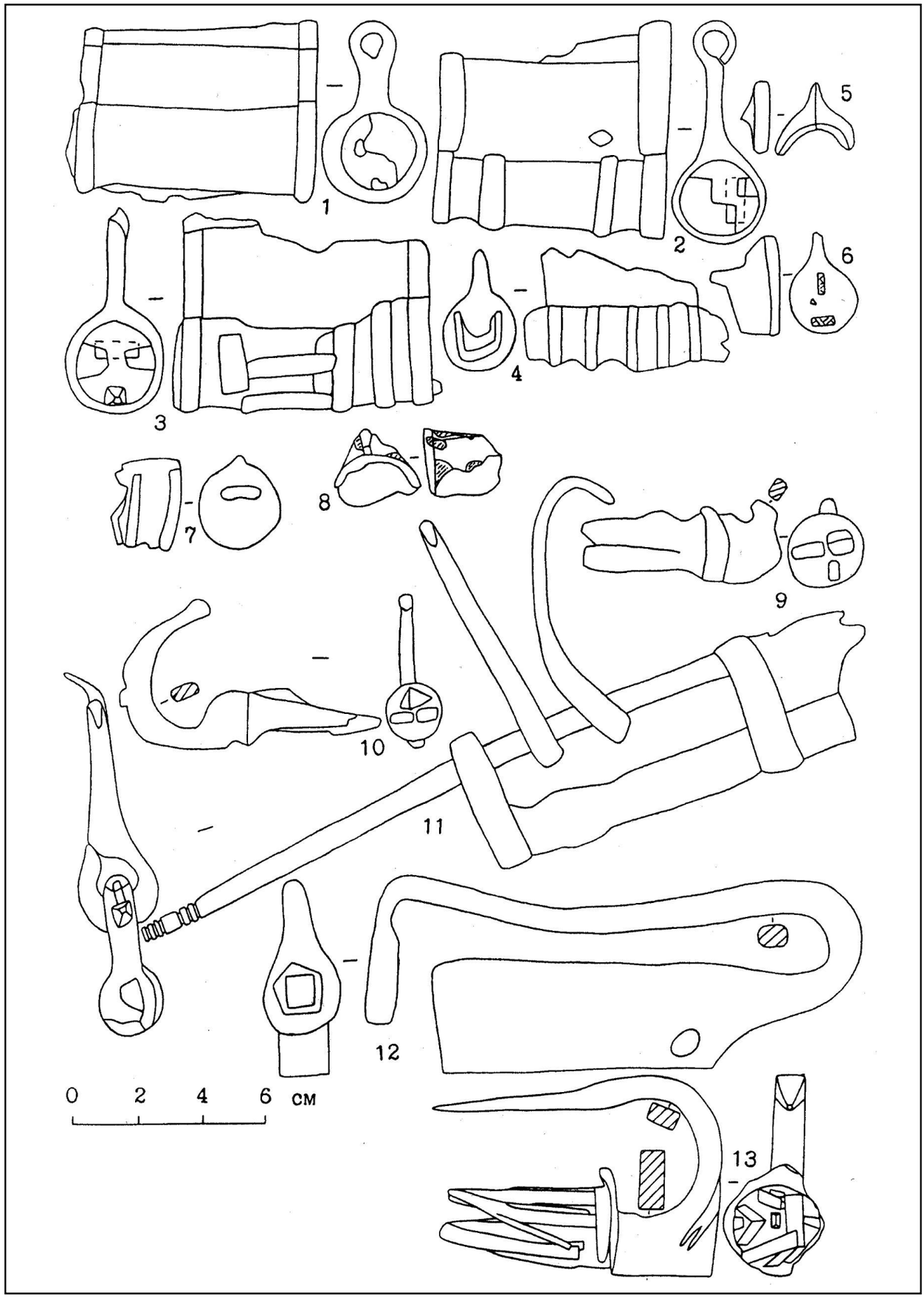

Fig.55. Iron locks (1-8, 11-12) and their springs (9-10, 13). 1-4, 10-13 - NMRT N 5365-19, inventory NN 1777, 1779, 1778, 1782, 1775, 1776 and without inventory N (10); N 5365-19 (13), inventory N 1780, old N 12811. 5-8 - SOMK NN 1223, 1247, NVSP 17337/7 (AO 159). 9 - Archaeological club-museum at the Saratov regional station of young tourists.

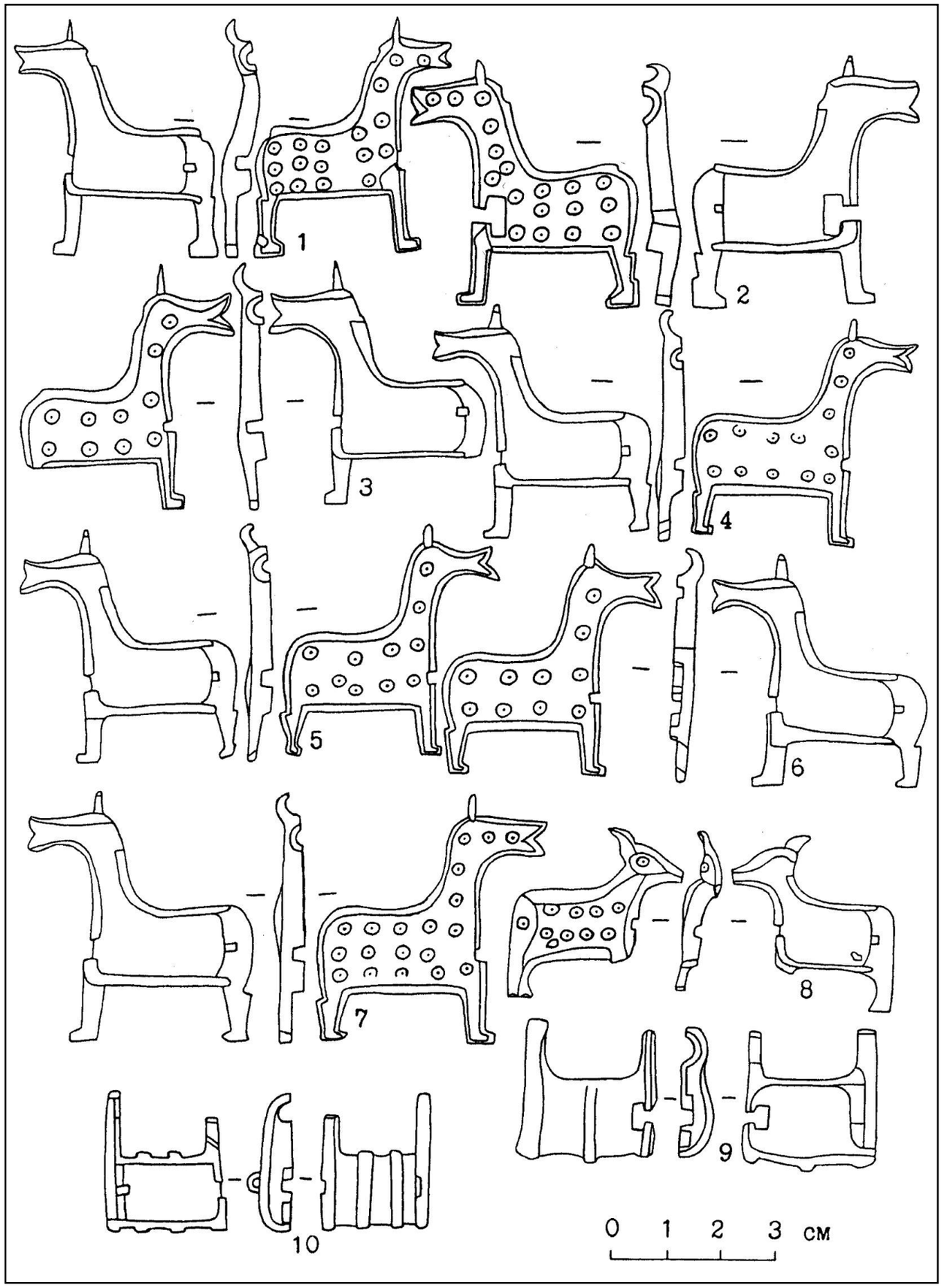

Fig.56. Halves of bronze locks.
1-3, 9-10 - SOMK NN AO 1244/1-3, NVSP 29779 (AO 288/4), 1245/4. 4-8 - NMRT N 5365-9.

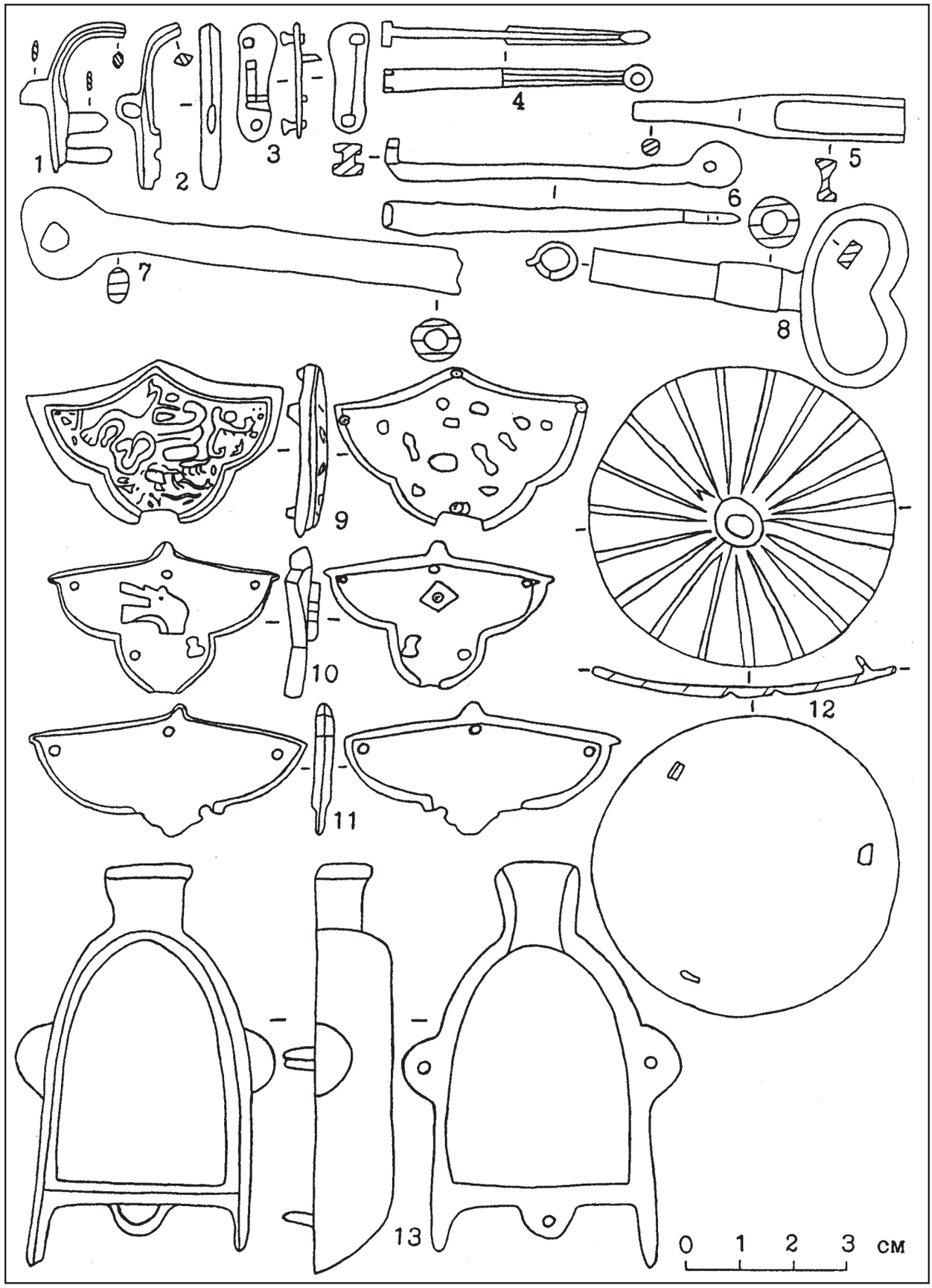

Fig.57. Springs from bronze locks (1-3), keys (4-8), large figured brackets (9-11), a plate (12) and a stirrup-like object (13). 1-5, 9-13 - bronze, 6-8 - iron. 1-3, 6, 9, 11 - SOMK NN NVSP 28696 (AO 262/7), 1229, 1220/4, NVSP 29782 (AO 288), 1309/4, NVSP 29775 (SUAK 1014; AO 261). 4-5, 8, 10, 12-13 - NMRT NN 5365-69, 5365-64 (old N 12438 and without NN), 5365-8 (inventory N 1783), 5365-32. 7 - Archaeological club-museum at the Saratov regional station of young tourists.

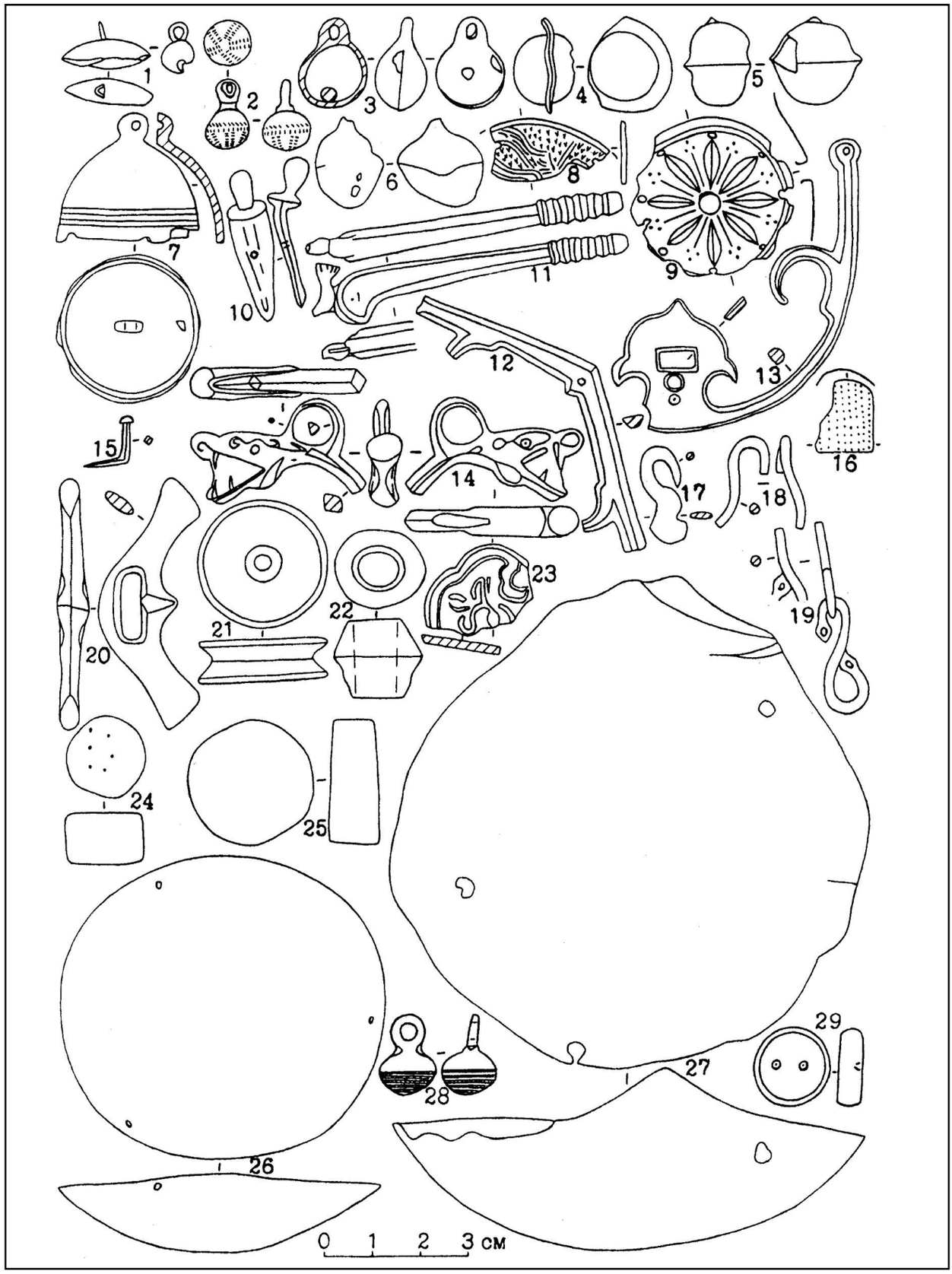

Fig.58. Small metal wares. 1-7, 9-14, 16-29 - bronze, 8 - silver, 15 - iron. 1-2, 7-9, 12-19, 22-23, 25, 29 - SOMK NN NVSP 29778 (SUAK 1014/27; AO 261); SMK 52039/A-2325 (AO 264/7); NVSP 27839 (SUAK 3907); 1251; 1227; NVSP 29776 (SUAK 1014; AO 262); NVSP 28303 (AO 266/2); NVSP 29773 (AO 168); NVSP 28705 (AO 263/1); 1222/2; 1043/5; 1289; 1223; NVSP 29783 (AO 300); NVSP 29774 (SUAK 1014/25; AO 261); investigations of 1997. 3-4, 10-11, 20-21, 26-27 - NMRT NN 5365-64, 5365-?, 5365-34, 5365-33, 5365-72. 5-6, 24 - the archaeological club-museum at the Saratov regional station of young tourists. 28 - GIM N 34162, inventory 952, N 19.

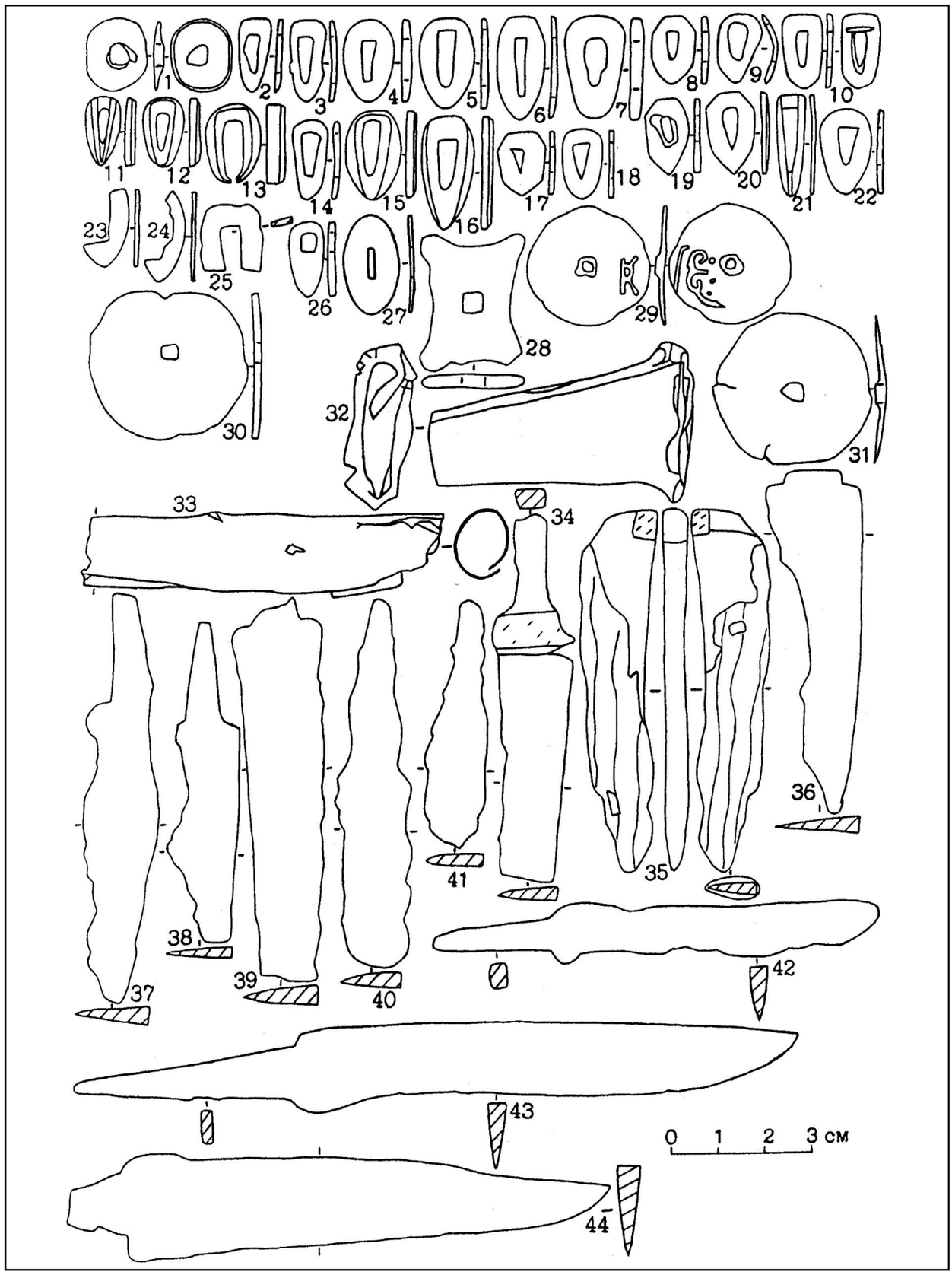

Fig.59. Knife couplings (1-31), facings of knife handles (32-33) and knifes (34-44). 1 - bronze and a lead, 2-33 - bronze, 34-35 - iron and bronze, 36-44 - iron. 1-25, 27, 28-32, 34-38 - SOMK NN 1220, 1223, 1227, 1252/2, 1257, investigations of 1998; NVSP 28638 (SUAK 1024; AO 262/8); 1309/3; NVSP 28711 (AO 263/11); NVSP 28702 (SUAK 1045; AO 262/3); 1040; NVSP 29908 (AO 316/7); NVSP 31007/1-2 (SUAK 1436). 26, 34, 39-41, 44 - the archaeological club-museum at the Saratov regional station of young tourists. 33 - GIM N 34162, inventory 952, N 42. 42-43 - NMRT N 5365-25, old N 7795, OAIII-23 (?); 5365-95, inventory N 1796, old N 12883.

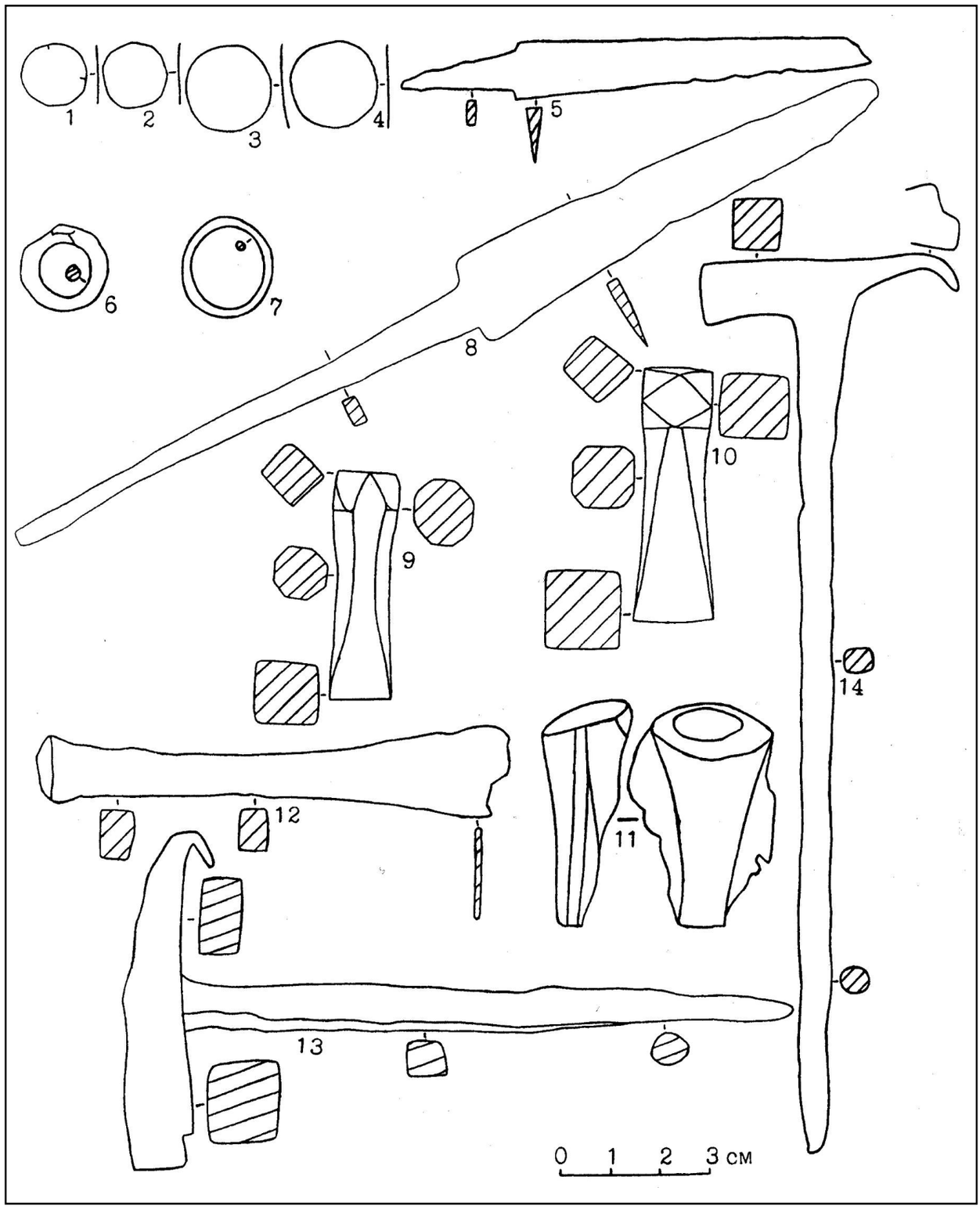

Fig.60. A plates (1-4), knifes (5, 8), rings (6-7), small anvils (9-10), filling of pouring grate (11), a chisel (12) and a jeweller's hammers (13-14). 1-4 - gold, 5-6, 8, 12-14 - iron, 7, 9-11 - bronze. 1-4, 11 - SOMK NN SMK 48393 (AO 327), D2-8; SMK 48394 (AO 331), D2-9; NVSP 30989 (SUAK 86). 5-7, 9-10 - GIM N 34162, inventory 952, NN 51-53, 21, 20. 8 - an archaeological club-museum at the Saratov regional station of young tourists, N 23. 12-14 - NMRT NN 5365-14, inventory N 1797, old N 1298, OAIII-11; 5365-23, inventory N 1767, old N 18823; 5365-23, inventory N 1788, old N 12209, OAIII.

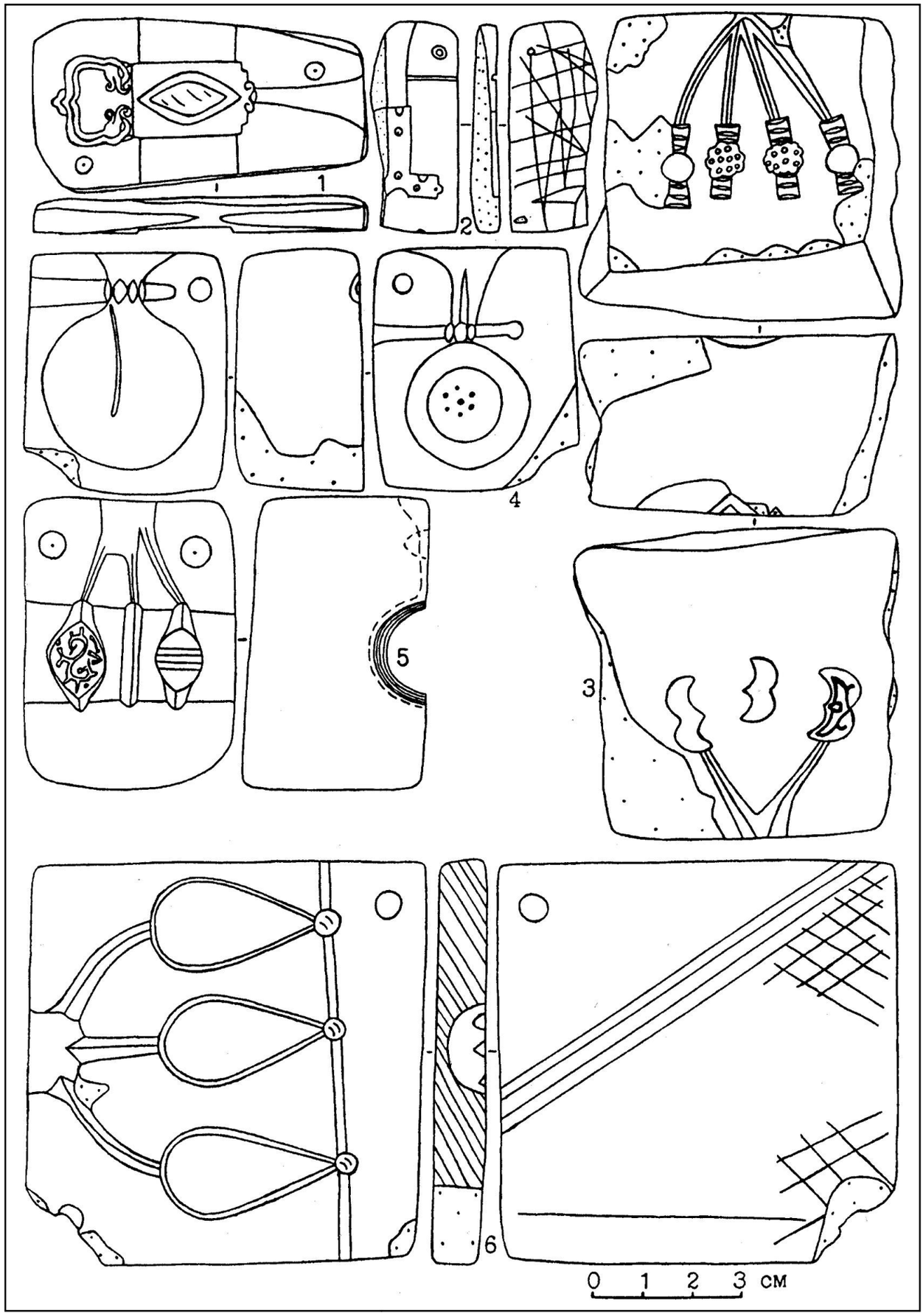

Fig.61. Bronze (1) and stone (2-6) casting moulds.
1, 4 - GE NN ZO-2, 7273,30; ZO-357, 7273.32. 2-3, 5-6 - SOMK NN AO 696, 968, 277, 996.

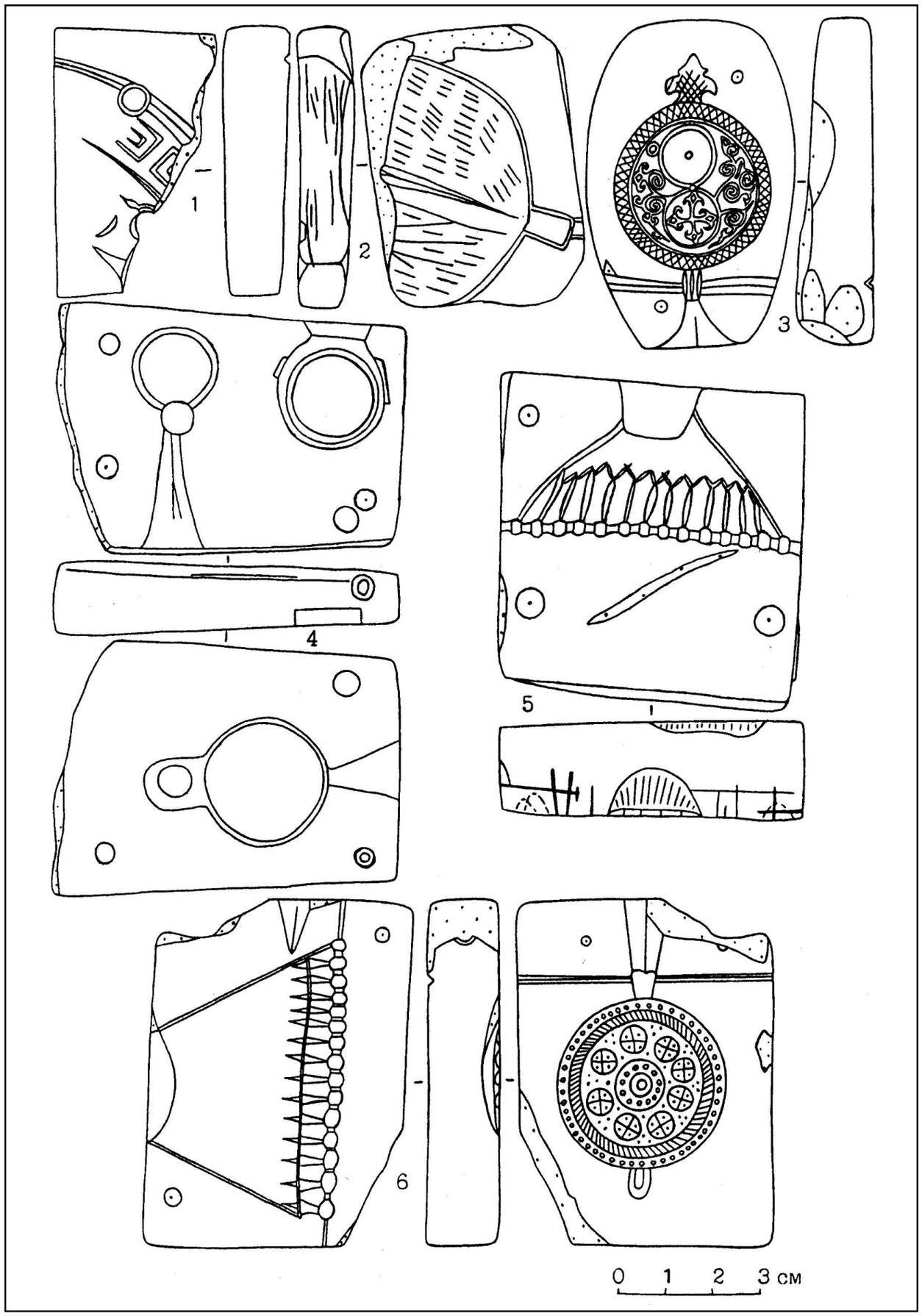

Fig.62. Stone casting moulds. 1 - NMRT N 5365-58. 2-3, 6 - GIM N 34162, inventory 952, NN 11, 10, 12. 4-5 - SOMK NN AO 970, 967 (SUAK 687).

Fig.63. Stone casting moulds. GIM N 34162, inventory 952, NN 10-12.

Fig.64. Stone casting mould. GIM N 34162, inventory 952, N 12.

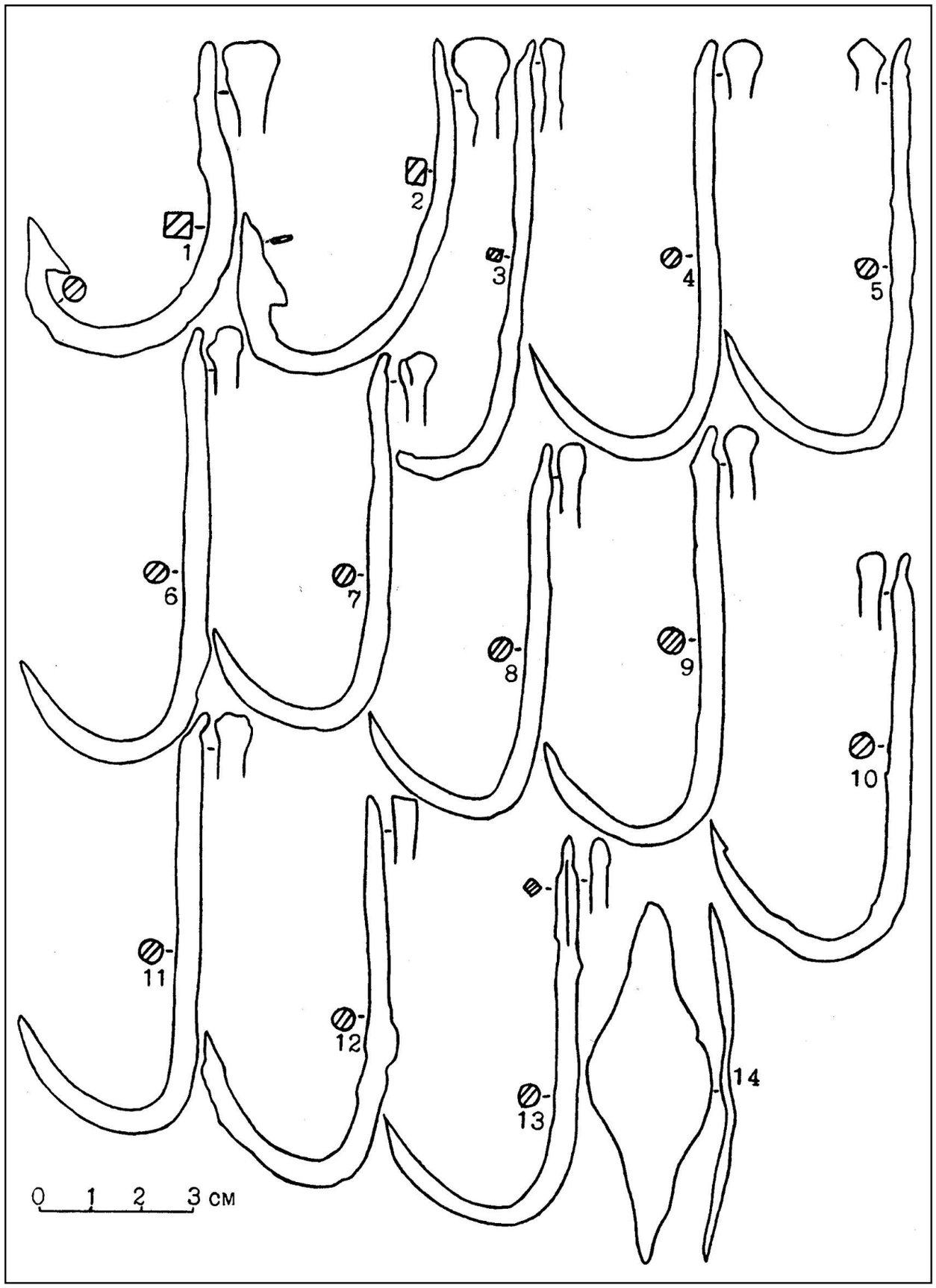

Fig.65. Iron fishing hooks (1-13) and a boat cramp (14). 1 - settlement of Podgornoe, 2-14 - Uvek site. 1 – EKM N 7737. 2-3 - NMRT N 5365-70, old N 12723. 4-14 - SOMK NN SMK 53339/A-2422 (AO 309), AO 309, NVSP 29904 (AO 316/5).

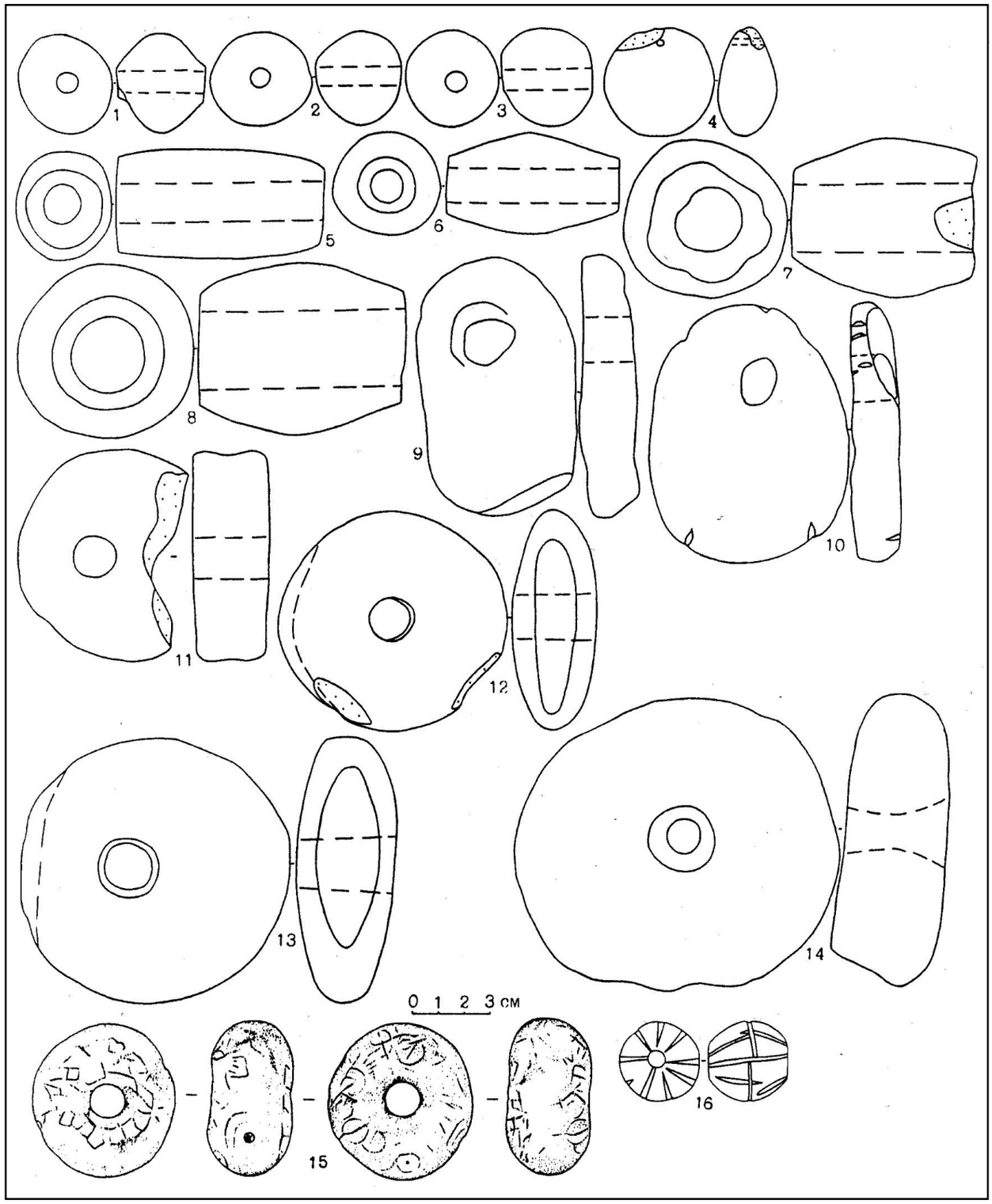

Fig.66. Ceramic (1-13, 16) and stone (14-15) fishing loads. 1-14, 16 - Uvek site, 15 - Hmelevskoe I settlement.
1-3, 5-13, 15 – SOMK NN NVSP 18121 (SUAK 170), AO 307, SMK 38575/A-68 (AO 305), 53337/A-2420 (AO 304), 53338/A-2421 (AO 308), NVSP 31471 (SUAK 2042/5, AO 910), AO 303, SMK 53336/A-2419 (AO 302), investigations of 1998.
4, 14 - NMRT NN old N 12807; 5365-34. 16 - GE N ZO-186, 7273,28, 7273,40.

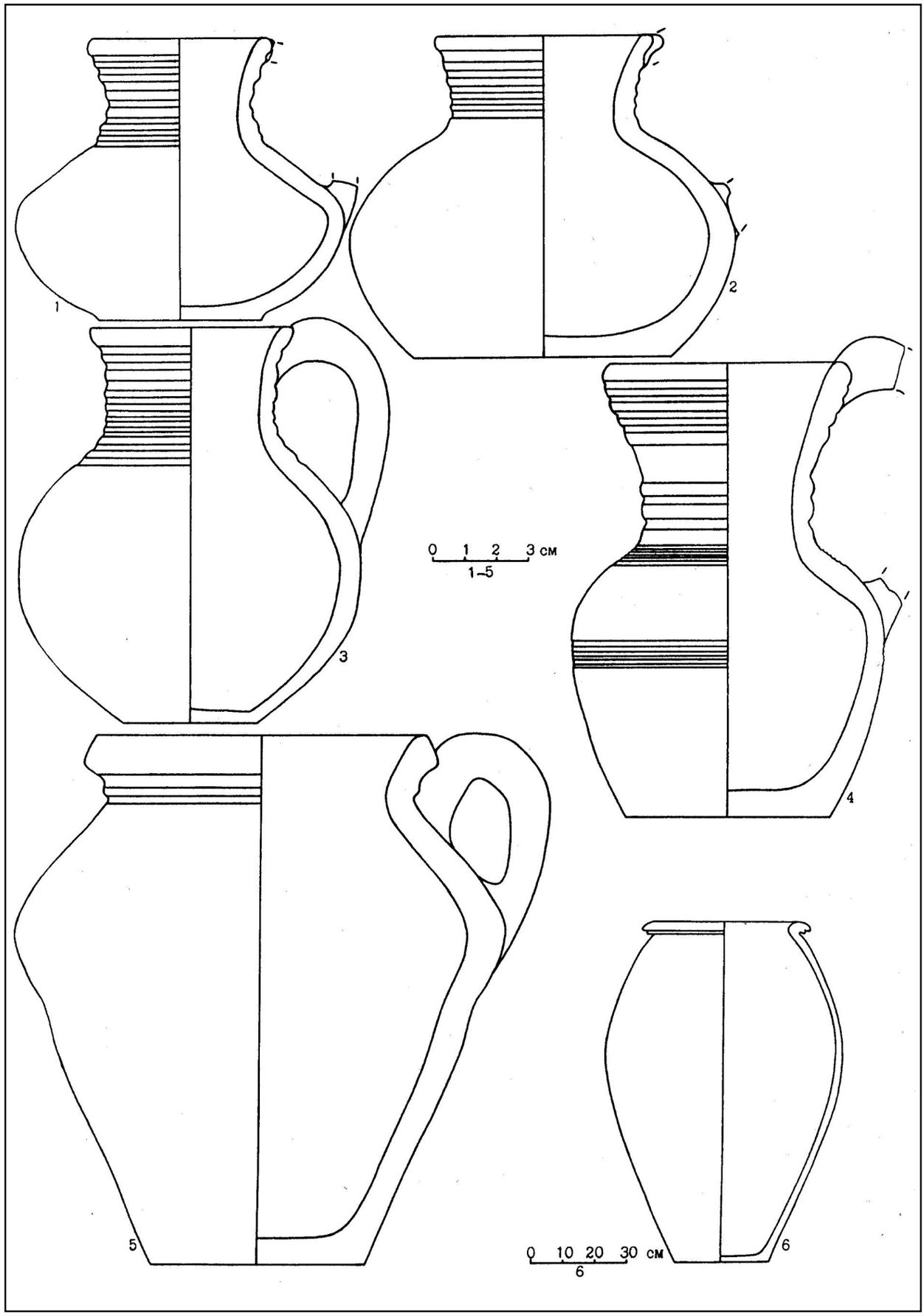

Fig.67. Unglazed pottery: jar-like (1-4) and flask-like (5) vessels, storage jar (6).
1-6 - SOMK NN SMK 51657-51658 (AO 222, 230), 52053/A-2336 (AO 226), 51652 (AO 209), 51654 (AO 211), AO 1505.

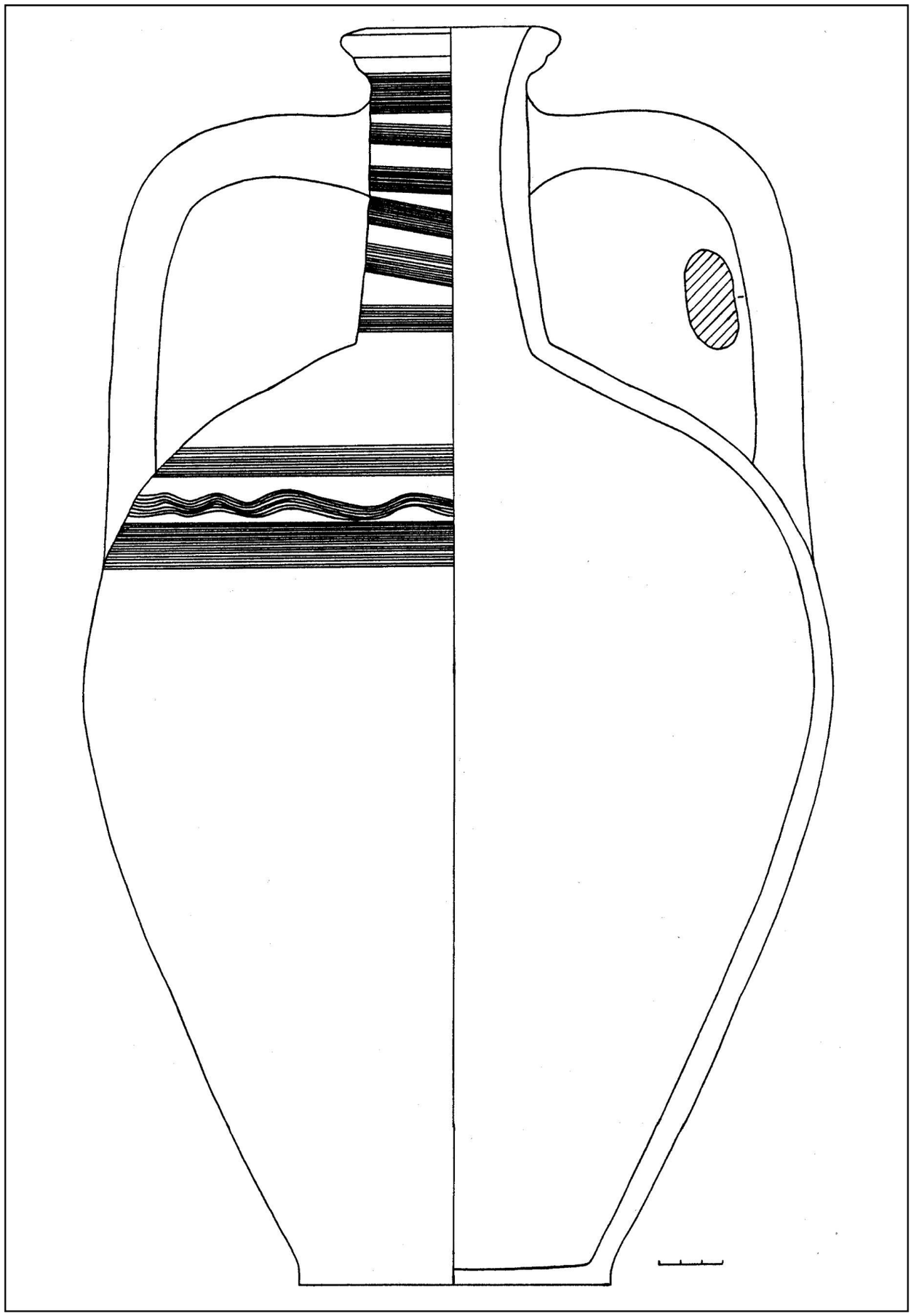

Fig.68. Unglazed two-handle jar. GIM N 26340, inventory 1507, N 1.

Fig.69. Unglazed two-handle jar (photo). GIM N 26340, inventory 1507, N 1.

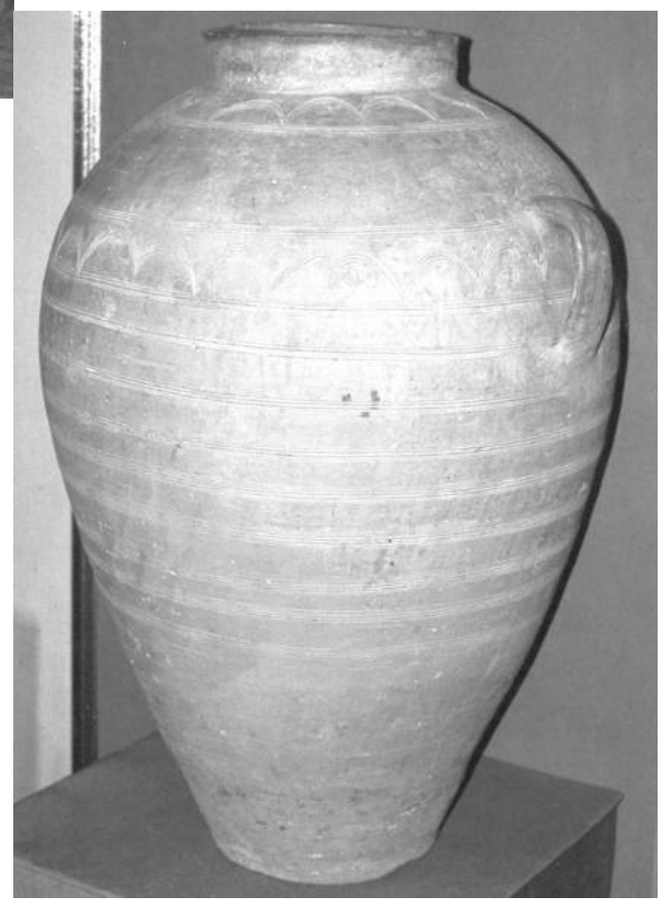

Fig.70. Unglazed storage jar with handles. NMRT N 5365-55, OAIII.

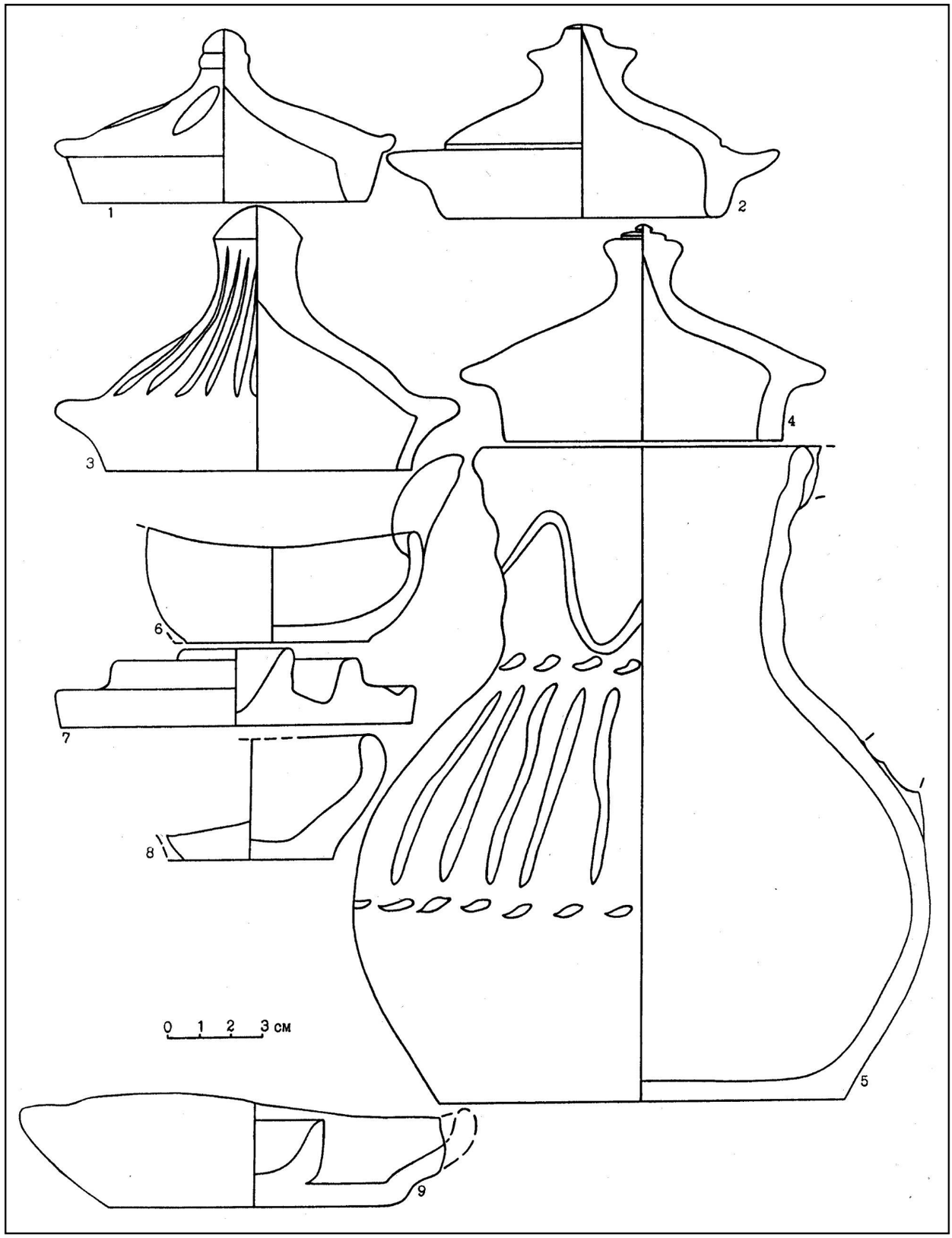

Fig.71. Unglazed pottery: lids (1-4), a jar-like vessel (5), clay lamps (6-9). 1-3, 7 - NMRT N 5365-38, old NN 12770-12770a, 12770e, OAIII-78, N 5365-39, old N 12777, OAIII-80. 4-5, 9 - SOMK NN SMK 51655 (SUAK 2030, AO 216), 51653 (OA 210). 6, 8 - the material is given by M.I.Kurakin.

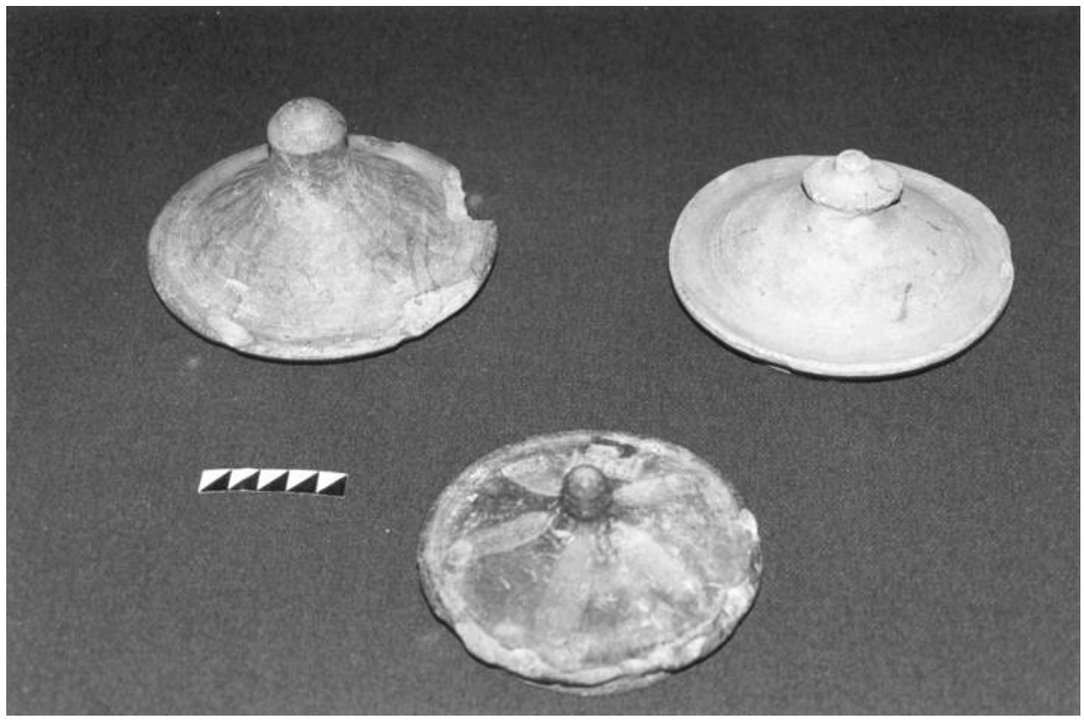

Fig.72. Unglazed lids. NMRT N 5365-38, old NN 12770-12770a, 12770e, OAIII-78.

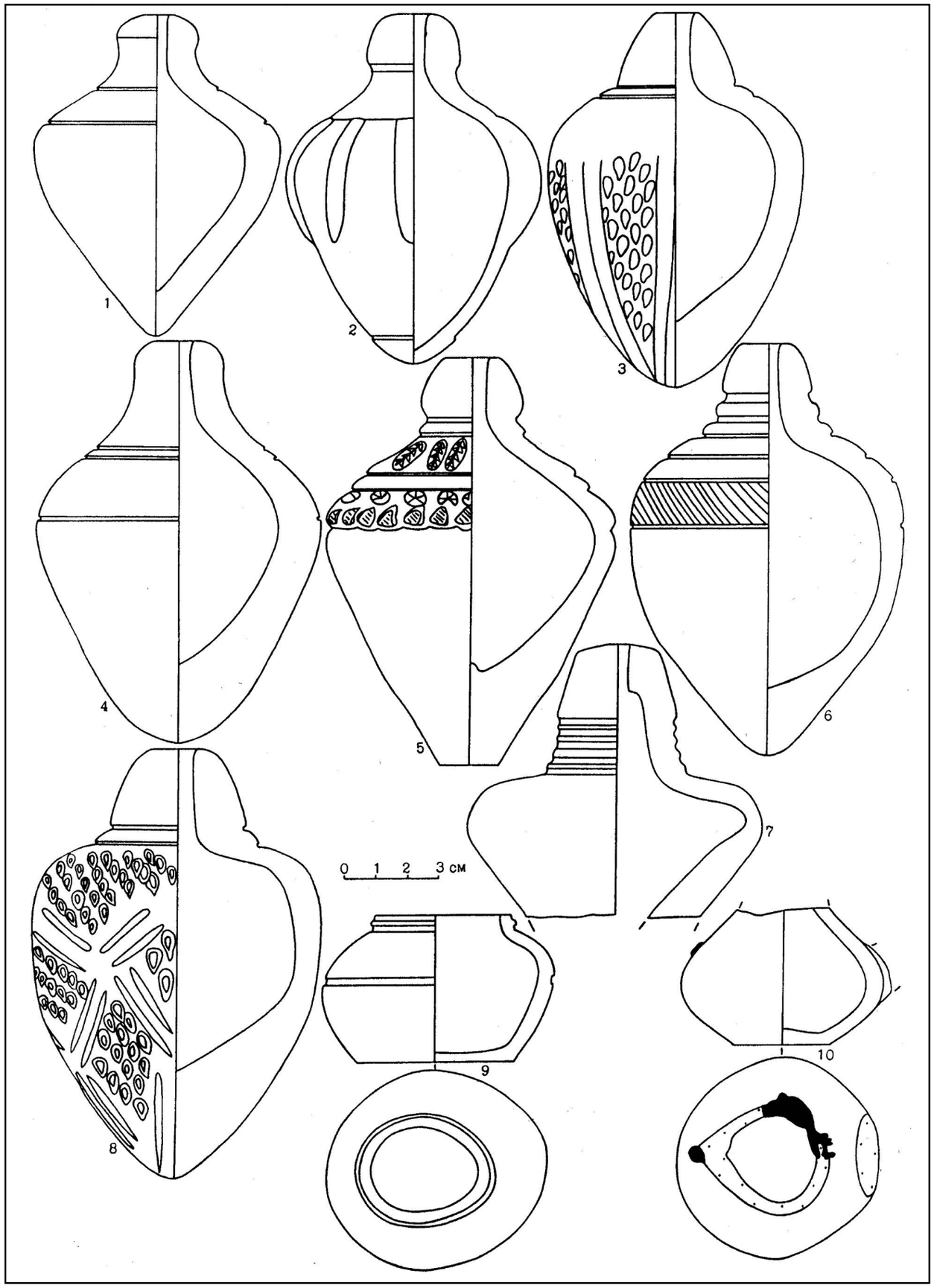

Fig.73. Unglazed pottery: sphere-cone vessels (1-8) and tiny vessels (9-10). 1-6, 8-9 - SOMK NN SMK 51982/A-2268 (SUAK 526, AO 254), 51966-51968 / A - 2258-2260 (AO 241, 245, 962), 51974/A-2266 (AO 247), 51971 (SUAK 126, AO 248), 52049/A-2332 (AO 2070), NVSP 29923 (SUAK 971/12). 7 - the material is given by M.I.Kurakin. 10 - NMRT N 5365-50, old N 18511.

Fig.74. Unglazed tiny vessel and small glazed jar.
NMRT NN 5365-50, old N 18511; 5365-44, old N 12771, OAIII-69.

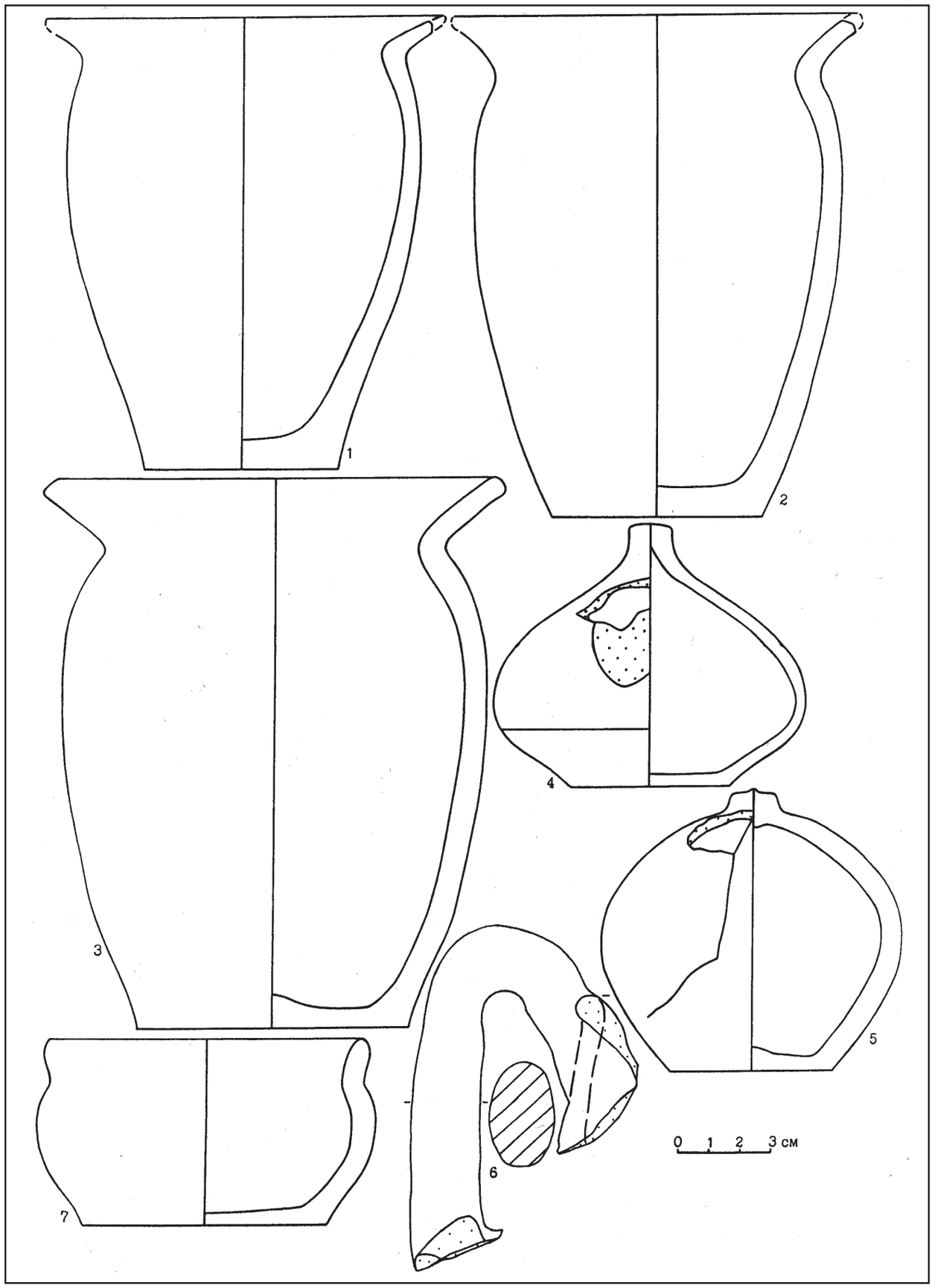

Fig.75. Glazed (1) and unglazed (2-7) pottery: tuvaks (1-3), money-boxes (4-5), handle of amphora (6), pot of the Mordvin shape (7). 1-2, 4 - SOMK NN SMK 52051-52052/A-2334-2335 (SUAK 170, AO 236), 52047/A-2330 (AO 233). 3, 5-6 - NMRT NN 5365-50, old N 12774; 5365-40, old N 19769, OAIII-73; 5365-34, OAIII-85. 7 – EKM, rescue excavations of 1994.

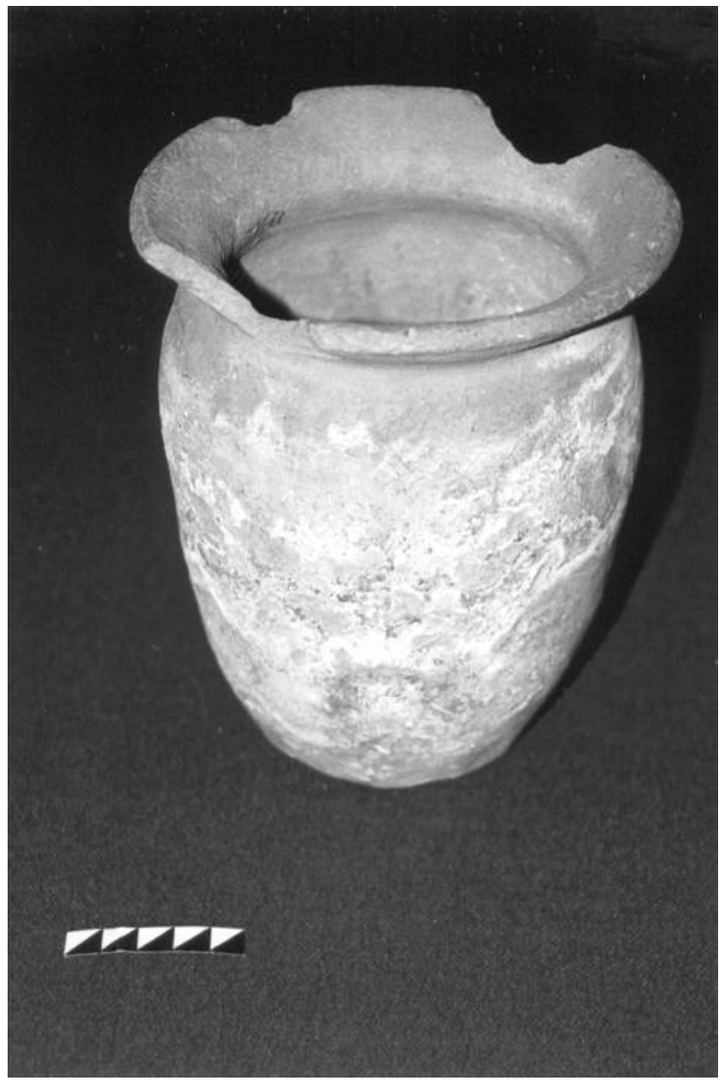

Fig.76. Unglazed tuvak. NMRT N 5365-50, old N 12774.

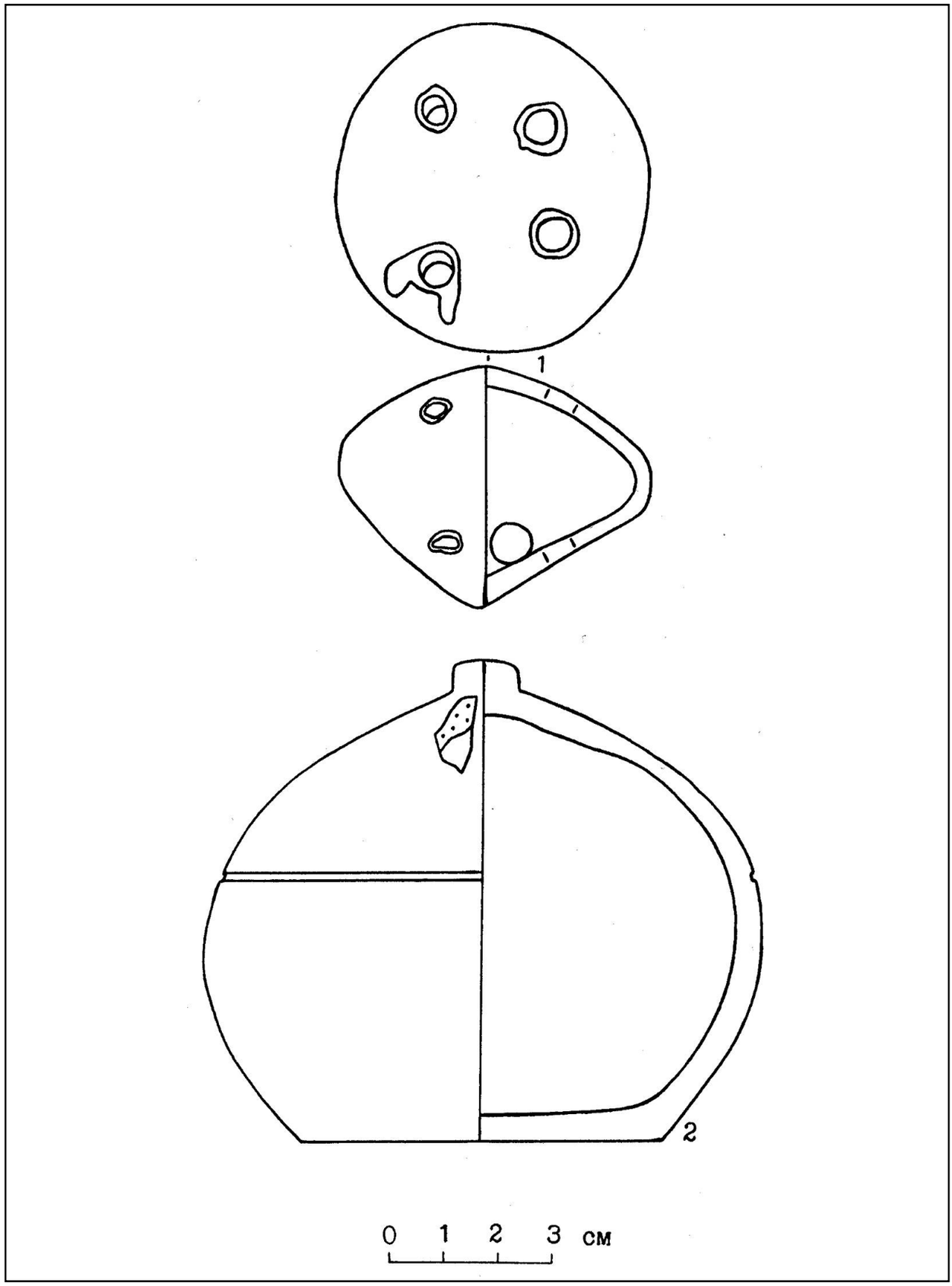

Fig.77. Unglazed clack with eight apertures (1) and money-box (2).
1 - GE N ZO-376, 157-13, reg. N 58725, N 12. 2 - NMRT N 5365-41, old N 12769, OAIII-73, N 25.

Fig.78. Unglazed flagon. SOMK N AO 235.

Fig.79. Unglazed flagon (sideways view). SOMK N AO 235.

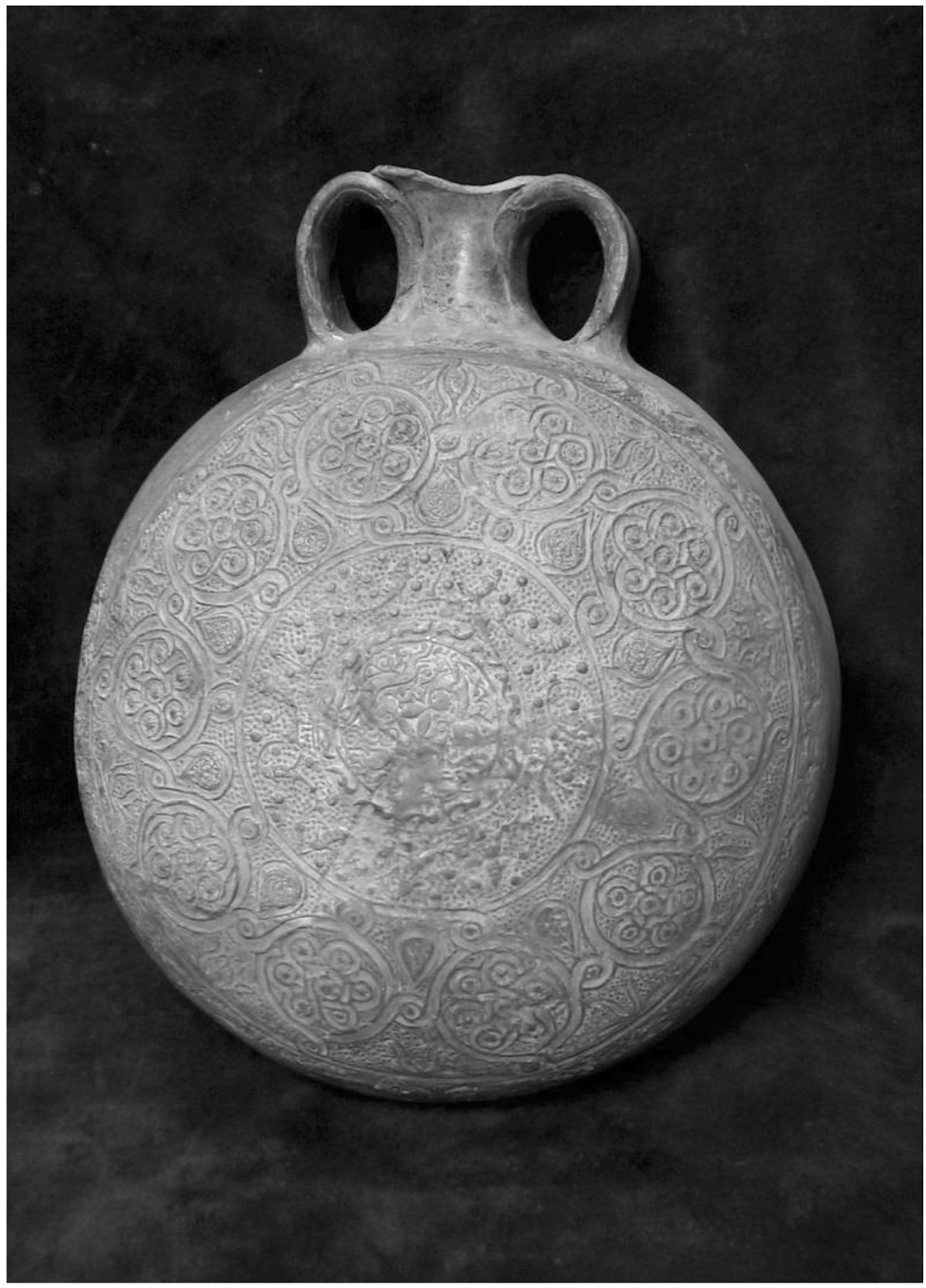

Fig.80. Unglazed grey-clay stamped flagon. SOMK N SMK 57925.

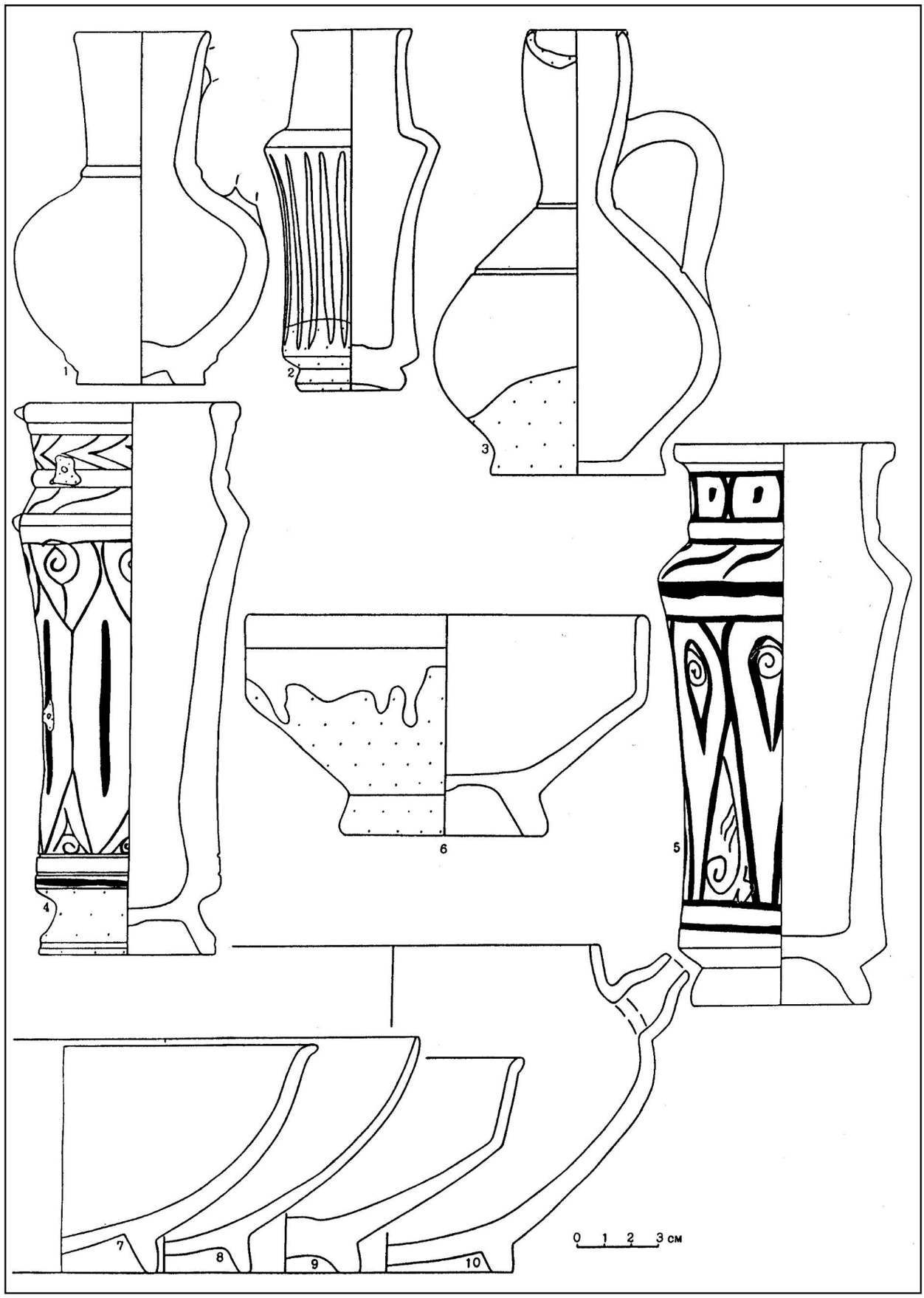

Fig.81. Kashi (1, 7-8, 10) and red clay (2-6, 9) glazed pottery. 1, 7-10 - SOMK NN NVSP 29770 (AO 225), AO 951, 217, 221, 1544. 2-5 - NMRT NN 5365-45, old N 14981, OAIII-68, 5365-44, old N 12771, OAIII-69, 5365-47, old N 13097, OAIII-67, 5365-56, OAIII-81e. 6 - the material is given by M.I.Kurakin.

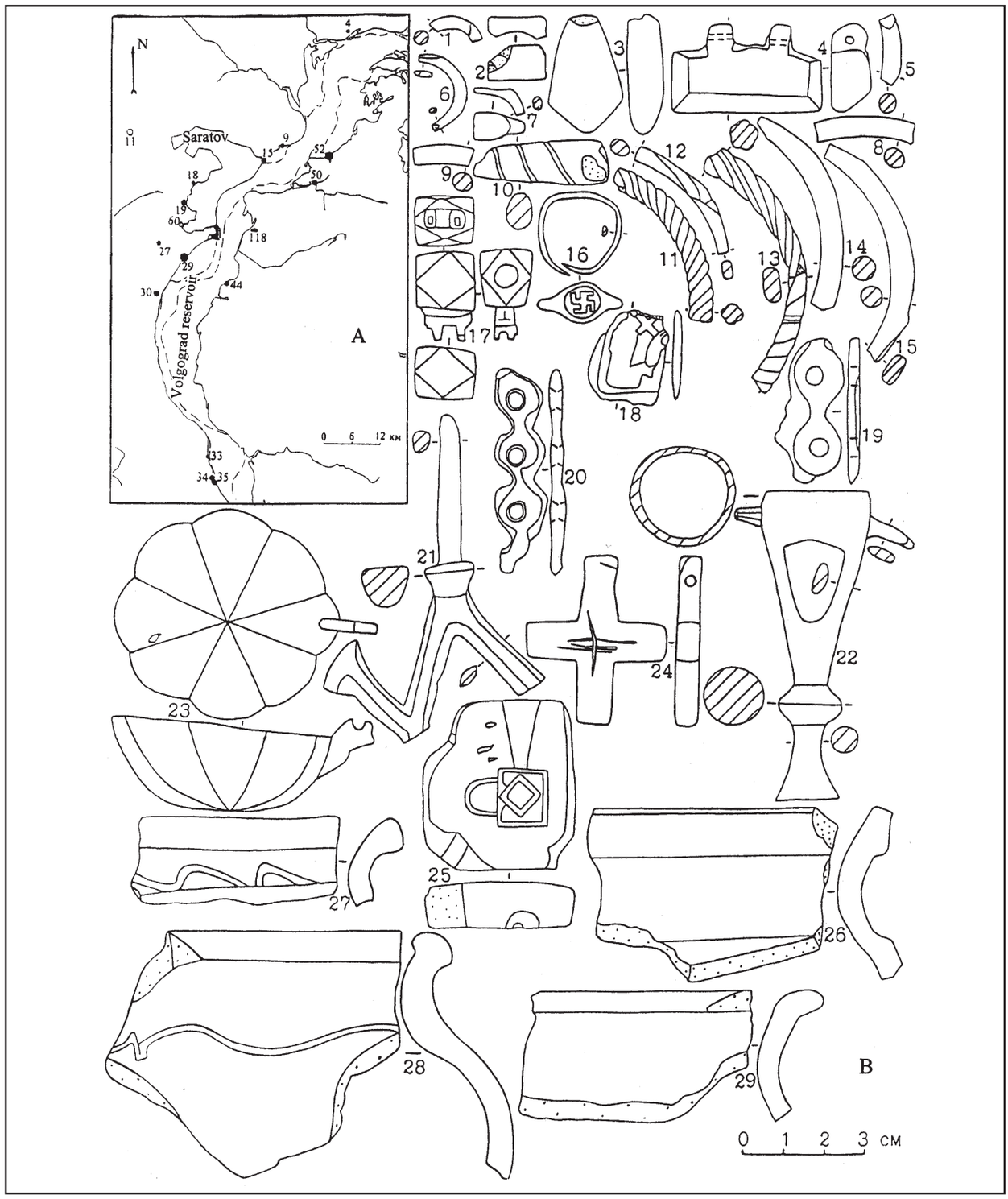

Fig.82. A. The scheme of a situation of the Uvek site and monuments of its periphery, on which Old Russian materials were found. Monuments designated on the scheme: 1 - Uvek urban site, 4 - Chardymskoe II hillfort and settlement, 9 - settlement at village Pristannoe, 11 - settlement at village Kurdium, 15 - Alekseevskoe hillfort, 18 - Rokotovskoe settlement, 19 - Boldyrevskoe settlement, 27 - Bagaevskoe settlement, 29 - Hmelevskoe I settlement, 30 - settlement at village Shiroky Buerak, 33 - Ahmatskoe settlement (in site 'Martyshkino'), 34-35 - settlements Kondakovo I and II, 44 - settlement at village Podgornoe, 50 - settlement at farm Shalovo, 52 - settlement in site 'Podstepnoe', 60 - Aleksandrovskoe site, 118 – barrow at Engels town. B. Unpublished Old Russian materials founded on Uvek urban site (1-7,9-15,17-23,25-28) and settlements at villages Podgornoe (8), Shumeyka (16,24), Kurdium (29): fragments of amber (1-2) and glass (6-7) rings, glass bracelets (5, 8-15), amber pendants (3-4), bronze ring (16), eyelet from enkolpion (17), a fragment of a small icon (18), parts of cast chains (19-20), details of khoroses (21-22), a censer (23), a stone cross (24) and casting mould (25), rims of pottery (26-29). 1, 3-6, 9-10, 12, 16-22, 25, 27-29 - SOMK NN 1228, SMK 52036/A-2322 (AO 208; SUAK 3601), NVSP 27835 (SUAK 2388), 18068, 27836 (SUAK 2388), 34914, SMK 47835 (AO 862/3), 1223, 1222/6, 1226/5, 1222/3, AO 275, NVSP 31423/1-2 (AO 906/1), 1027. 2, 7, 11, 13-15, 23, 26 - NMRT NN 5365-?, 5365-58, without inventory N, 5365-32, 5365-63 (OAIII-3). 8, 24 - EKM NN 9784, 7441.

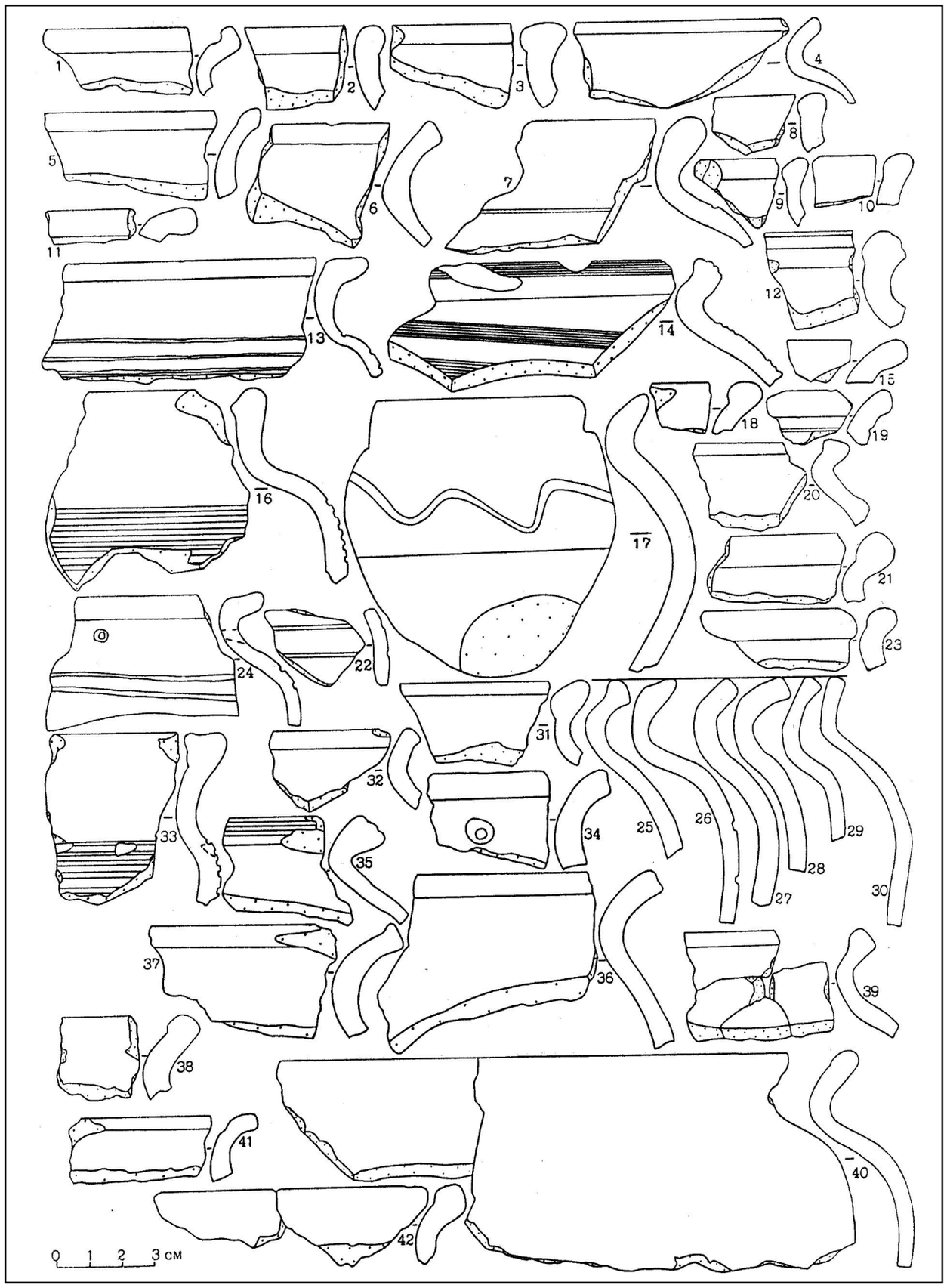

Fig.83. Old Russian pottery from Ukek and its periphery: Uvek (1-7,13-14,16-17,24-30) and Alekseevskoe (8-9,12,20-21) urban sites, settlements Pristannoe (18), Boldyrevskoe (23), Bagaevskoe (31-37), Hmelevskoe I (11,15,19,22,38-40) and Shiroky Buerak (41-42), Aleksandrovskoe site (10). 1-23,31-42 - SOMK NN NVSP 34926-34932, 29089, 31424/1-2 (AO 906/1), 744 (AO 996), NVSP 31423/3 (AO 906/1), 29091, materials of investigations of 1995-1996.
24-30 - Archaeological club-museum at the Saratov regional station of young tourists.

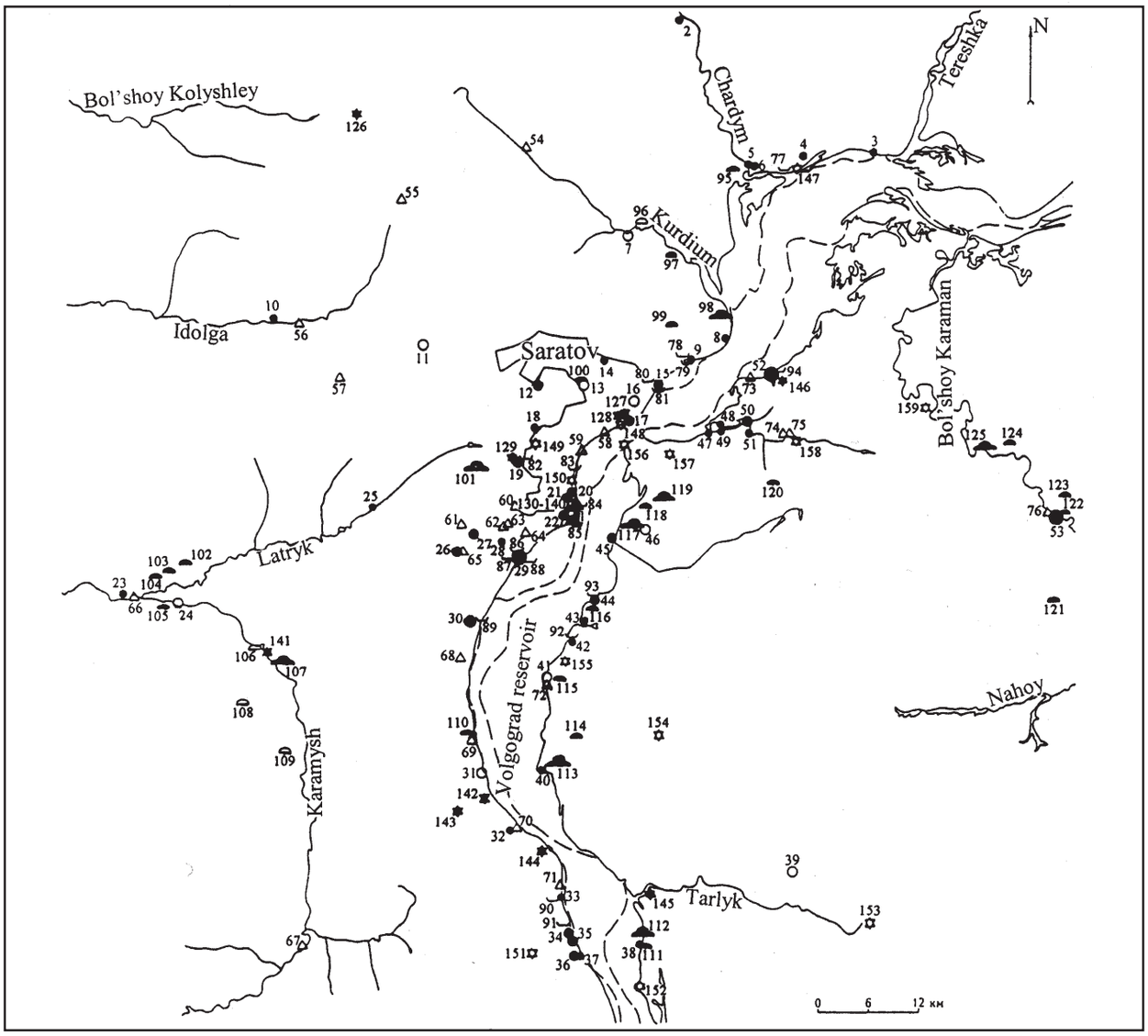

Fig.84. The scheme of a situation of monuments of Ukek regions. Settlements: 1 - Uvek urban site, 2 - Chernyshevka-1, 3 - Usovka, 4 - Chardymskoe II hillfort and settlement, 5 - Chardymskoe I hillfort, 6 - Chardymskoe IV hillfort, 7 - Farm Mohovoy, 8 – Ust'-Kurdium hillfort, 9 - Pristannoe, 10 – Oktyabrsky Gorodok, 11 - Kurdium, 12 - Polivanovka, 13 - summer residence of Korol'kova, 14 – settlement Severnyy ('Pesochnoe'), 15 - Alekseevskoe hillfort, 16 - Sokolovaya mountain, 17 – Lermontova Street, 18 - Rokotovka, 19 - Boldyrevka, 20 - Uvek I settlement, 21 - Uvek II settlement, 22 - Uvek III settlement, 23 - Vislovka II, 24 – Bol'shaya Dmitrievka, 25 - Konstantinovka, 26 – Kolotov Buerak, 27 - Bagaevka, 28 - Hmelevskoe II, 29 - Hmelevskoe I, 30 – Shiroky Buerak, 31 – 'Elansky Ruchey', 32 - Ahmatskoe hillfort, 33 - Martyshkino, 34 - Kondakovo I, 35 - Kondakovo II, 36 - Kondakovo III, 37 - Kondakovo I, 38 - Skatovka, 39 - Chapaevo (Freyzengeym), 40 – Zaumor'e, 41 – Uzmor'e, 42 - Ternovka I, 43 - Ternovka II, 44 - Podgornoe, 45 - Kvasnikovka, 46 - Anisovka, 47 - mouth of Saratovka river, 48 - 'Ivan', 49 – Uchhoz I, 50 – Praporsky Bugor, 51 - 'Plotina', 52 - Shumeyka ('Podstepnoe'), 53 - Sovetskoe ('Zimnik'). Sites: 54 - Hlebnovka, 55 - 'Belaya Voda', 56 - Kuvyka, 57 - Estontsy, 58 – Chernyshevskogo Street, 59 - Yurish, 60 - Aleksandrovskoe, 61 – Burkin Buerak, 62 – Sel'hoztehnika I, 63 - Sel'hoztehnika II, 64 - Sel'hoztehnika IV, 65 – Kolotov Buerak, 66 - Petropavlovka, 67 - Karamysh station, 68 - Pudovkino, 69 - Sosnovka-3, 70 - Ahmatskoe I, 71 - Ahmatskoe II, 72 – Uzmor'e, 73 - Shumeyka, 74 - Pribrezhnyy I, 75 - Pribrezhnyy II, 76 - 'Mys'. Burial grounds: 77 - Chardymsky, 78 - burial on Tanavskoe site, 79 - Pristannoe, 80 - 'Kombayn', 81 - Alekseevsky, 82 - Boldyrevsky, 83 - Uleshi, 84 - Uvek II, 85 - Uvek I, 86 - Hmelevsky II, 87 - Hmelevsky III, 88 - Hmelevsky I, 89 – Shiroky Buerak, 90 - Ahmat ('Martyshkino'), 91 – Nizhnyaya Studenka-I, 92 - Ternovka, 93 - Podgornoe, 94 - Shumeyka ('Podstepnoe'). Barrows and barrow groups: 95 - Raslovka, 96 – Novaya Lipovka, 97 – Ust'-Kurdium II, 98 – Ust'-Kurdium I, 99 – Dolgy Buerak, 100 - Vishnevoe, 101 - Astrakhan tract, 102 - Dvoenka II, 103 - Dvoenka I, 104 – Bol'shaya Dmitrievka I, 105 - Bol'shaya Dmitrievka II, 106 - Rybushka II, 107 - Rybushka I, 108 - Rybushka III, 109 - Panitskoe, 110 - Sosnovka, 111 - Skatovka II, 112 - Skatovka I, 113 – Zaumor'e, 114 - Berezovka, 115 – Uzmor'e, 116 - Podgornoe, 117 - Kvasnikovka, 118 - Engels, 119 - Pokrovsk, 120 – Suhaya Saratovka, 121 - Sovetskoe (Mariental') II, 122 - Sovetskoe III, 123 - Sovetskoe (Mariental') I, 124 - Susly, 125 - Krutoyarovka. Hoards of coins: 126 - Polchaninovka, 127 - Saratov of 1900, 128 - Saratov of 1847, 129 - Boldyrevka, 130-140 - Uvek I-XI, of 1869. 1860s, 1879, 1889, 1891a, 1891b, 1893, 1904, 1911-1912 , 1912, 1994, 141 - Rybushka, 142 - Mordovo I, 143 - Mordovo II, 144 - Ahmat, 145 - Tarlykovka, 146 - Podstepnoe. Separate finds of coins: 147 - Chardym, 148 – Naberezhnaya Kosmonavtov, 149 – Esipovka, 150 - Knyazevka, 151 – farm Studensky, 152 – Privol'noe, 153 - Voskresenka, 154 - Berezovka, 155 – Uzmor'e, 156 – Pokrovskaya Buhta, 157 - Pokrovskaya suburb, 158 – river Saratovka, 159 - Osinovka.

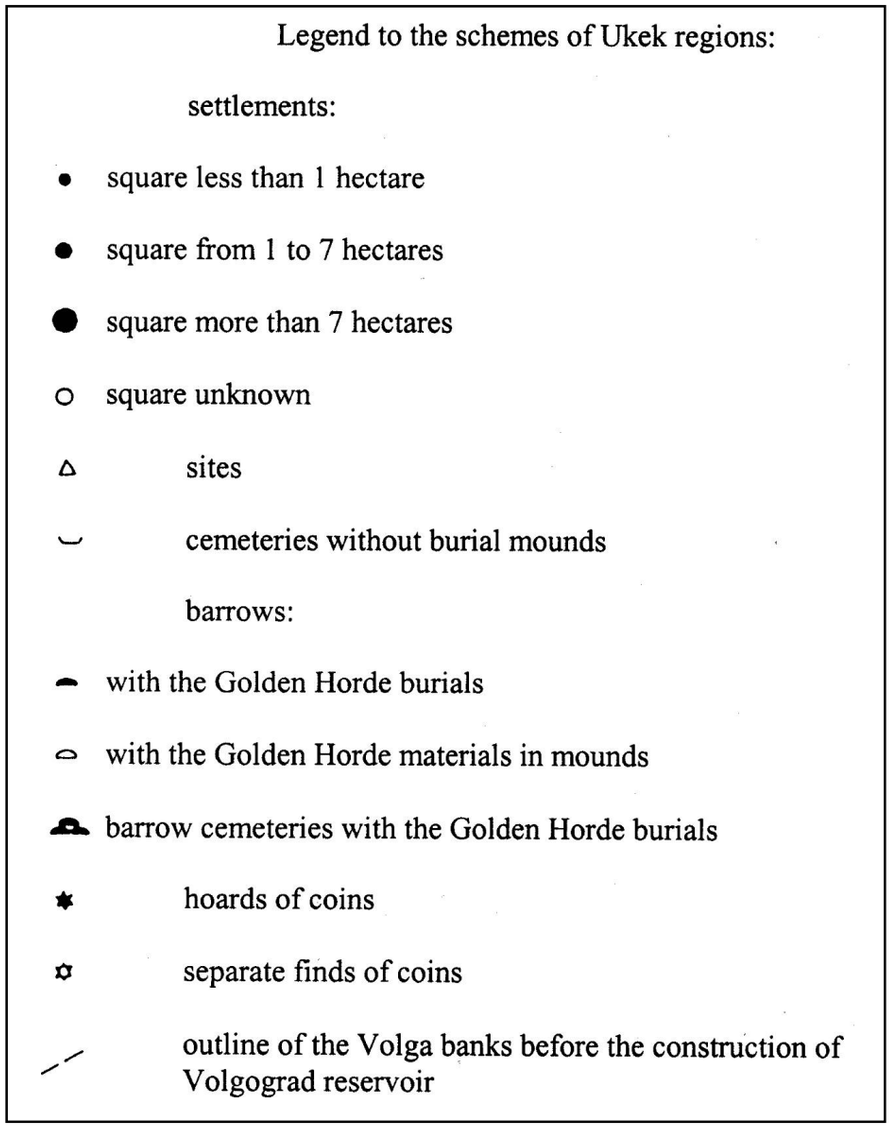
Legend to the schemes of Ukek regions:
settlements:
square less than 1 hectare
square from 1 to 7 hectares
square more than 7 hectares
square unknown
sites
cemeteries without burial mounds
barrows:
with the Golden Horde burials
with the Golden Horde materials in mounds
barrow cemeteries with the Golden Horde burials
hoards of coins
separate finds of coins
outline of the Volga banks before the construction of Volgograd reservoir

Fig.85. Legend to the schemes of Ukek regions (fig.84, 90-92).

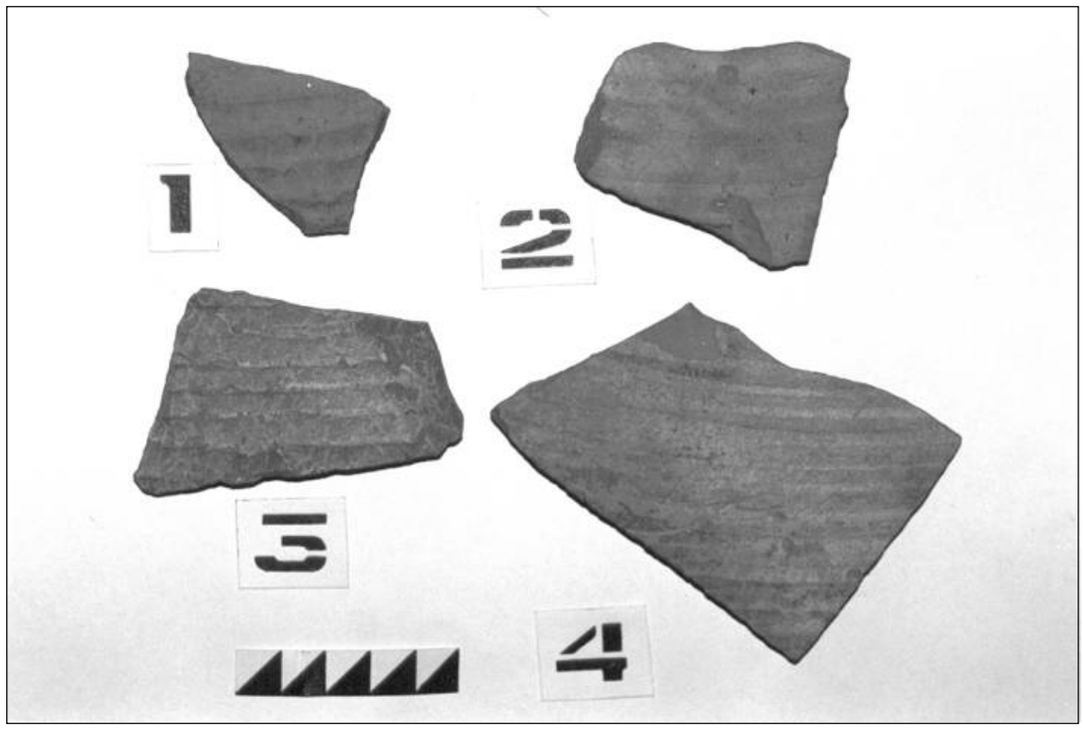

Fig.86. Fragments of Trebizond amphorae from objects on Hmelevskoe I settlement, trench I, 2000, pit 4 (1) and 1999, pits 3 (2), 1 (3-4).

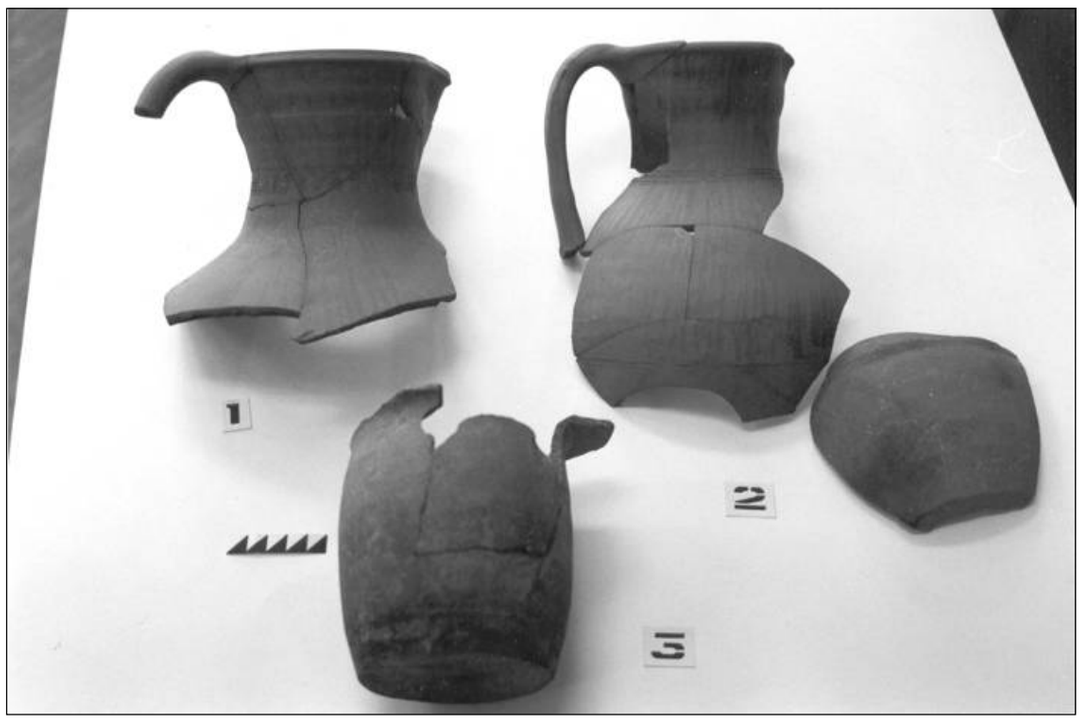

Fig.87. Unglazed jars (1-2) and tuvak (3) from trench I (1999) on Hmelevskoe I settlement, pit 4.

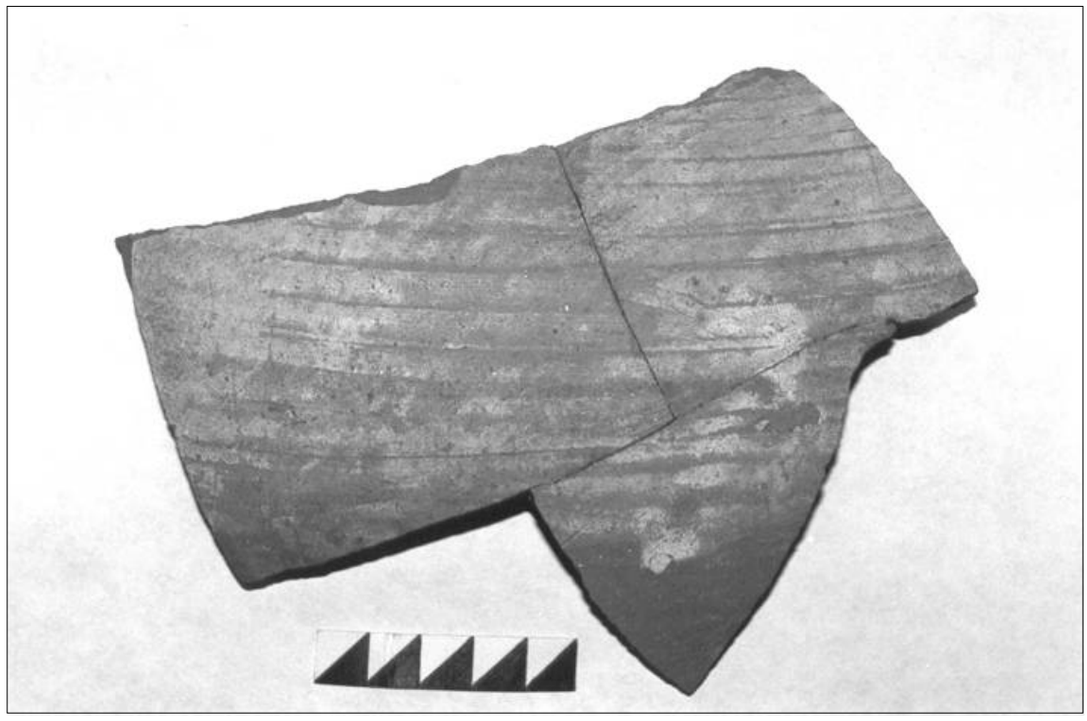

Fig.88. Fragment of Trebizond amphora from trench I (2001) on Shiroky Buerak settlement, pit 1.

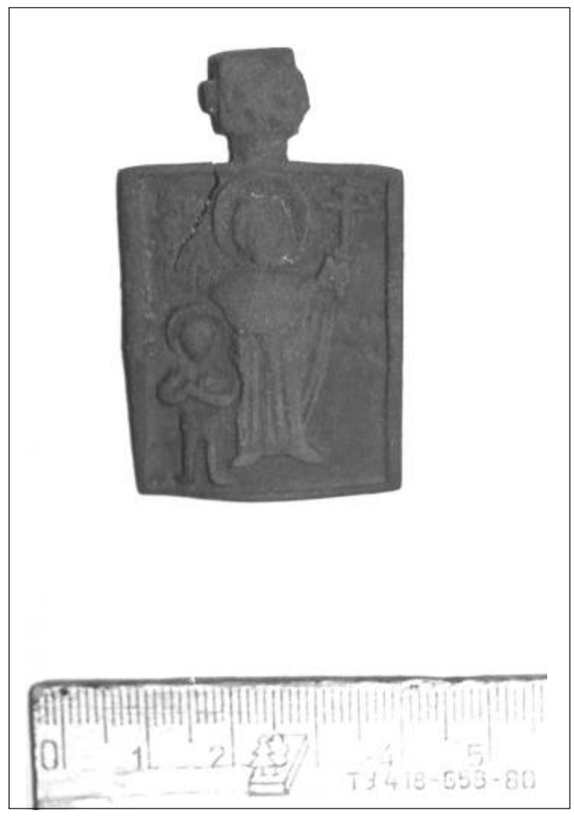

Fig.89. Bronze icon from Kondakovo II settlement. EKM N 12664.

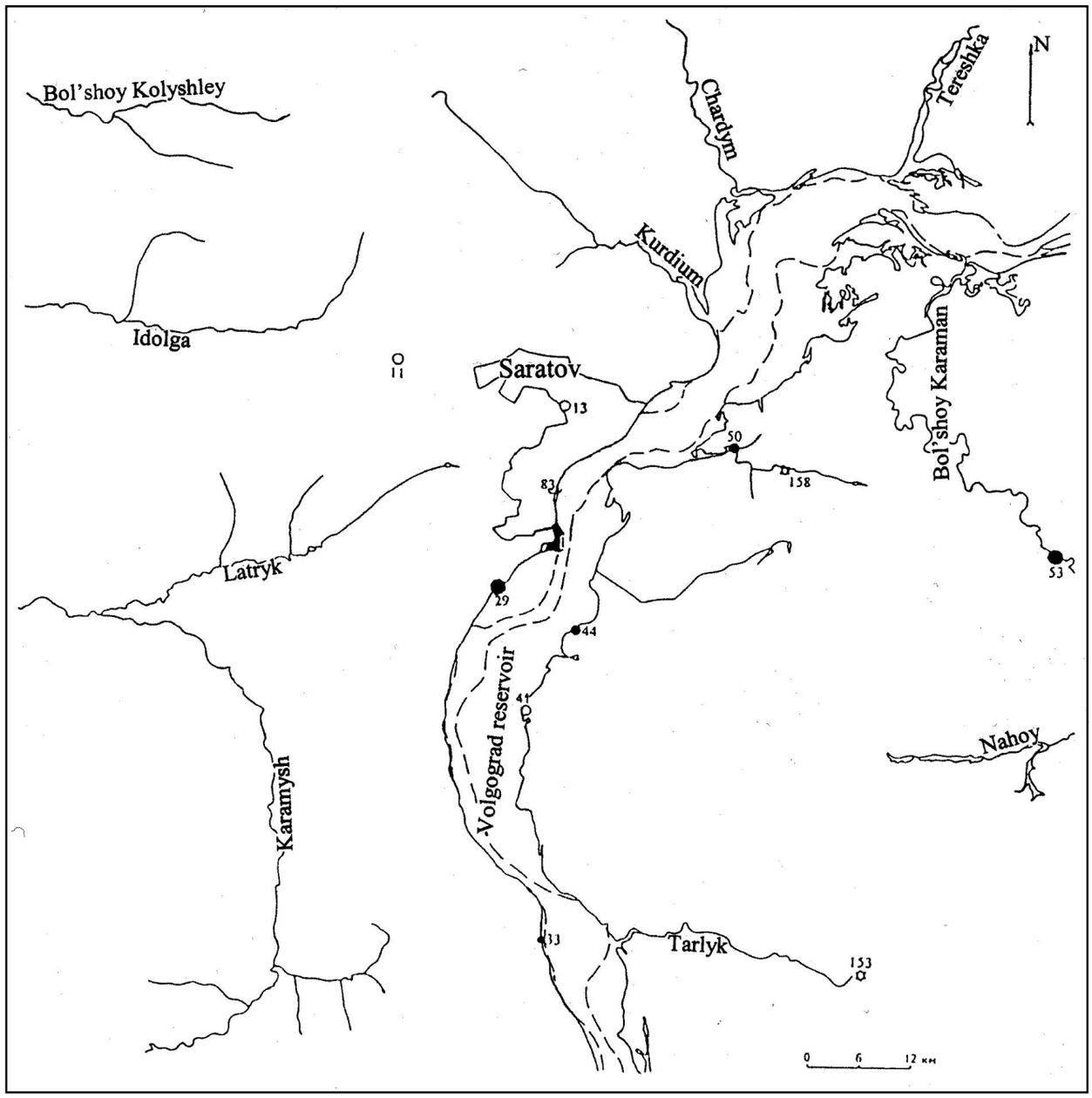

Fig.90. The monuments of Ukek regions, on which were found coins of 1266-1312 (the numbering of monuments on a fig.90-92 corresponds to numbering in the text of chapter III and in a fig.84).

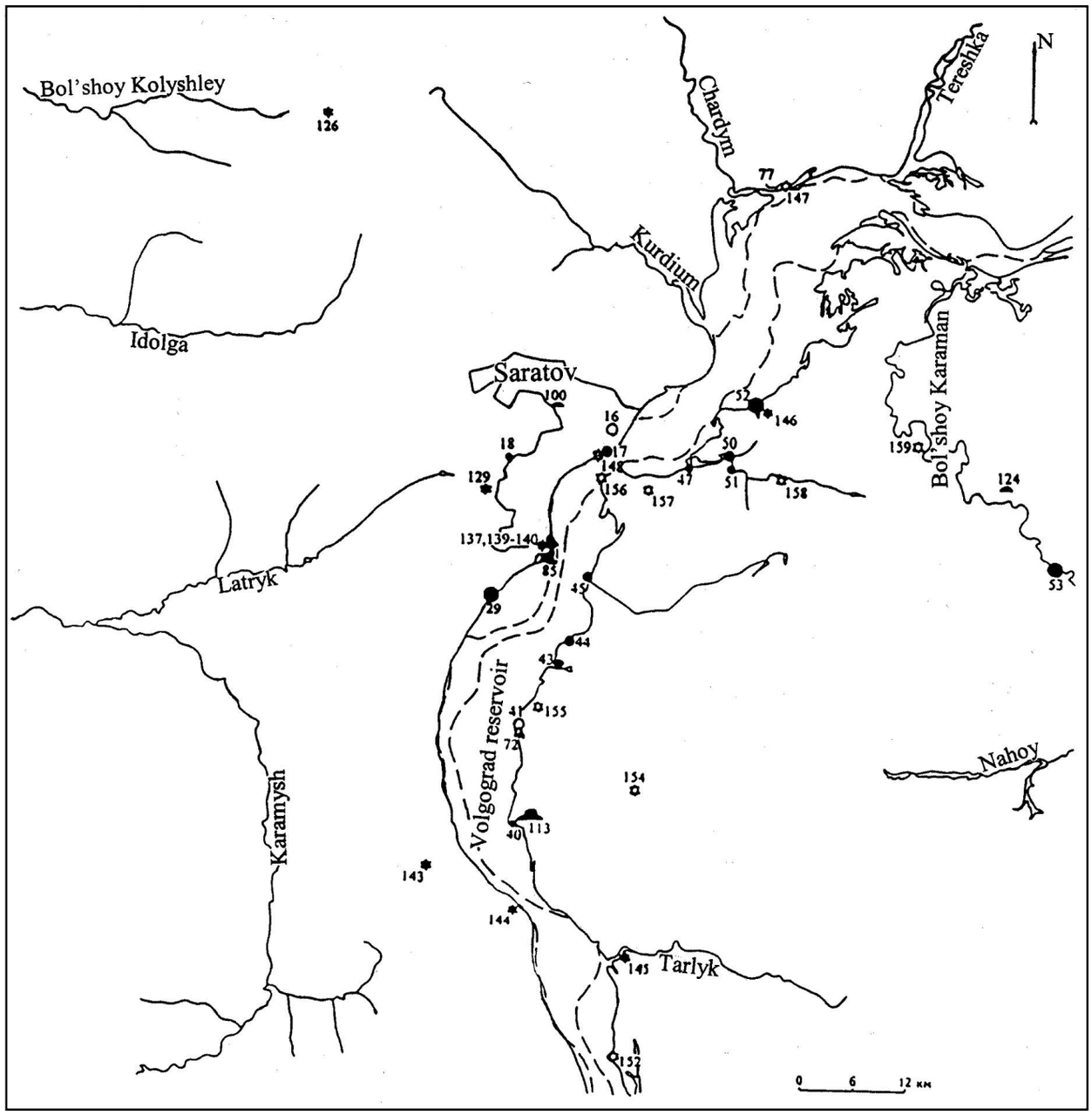

Fig.91. The monuments of Ukek regions, on which were found coins of 1312-1365.

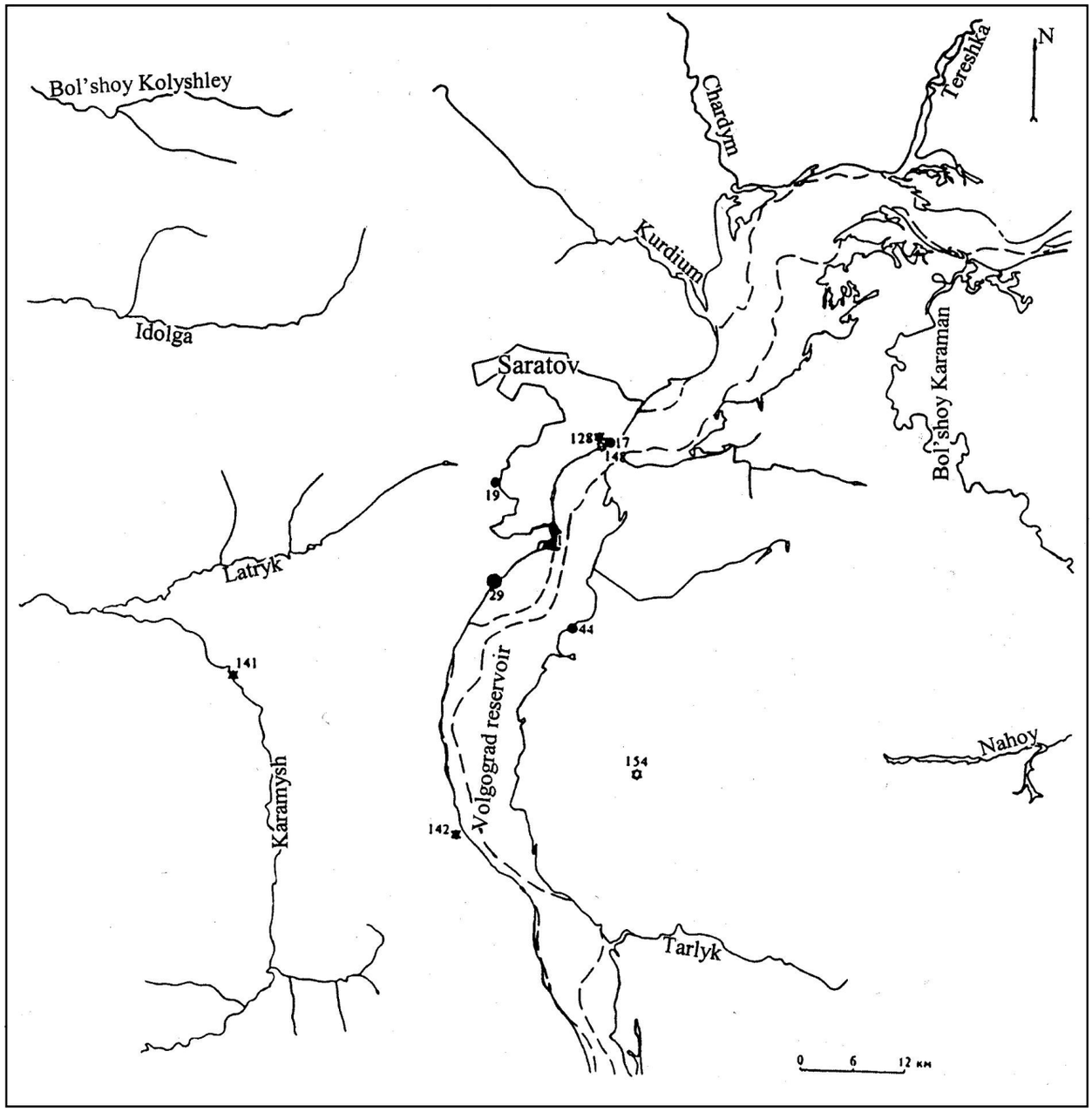

Fig.92. The monuments of Ukek regions, on which were found coins of 1365-1395.